

0988002 00201
102290 2808060

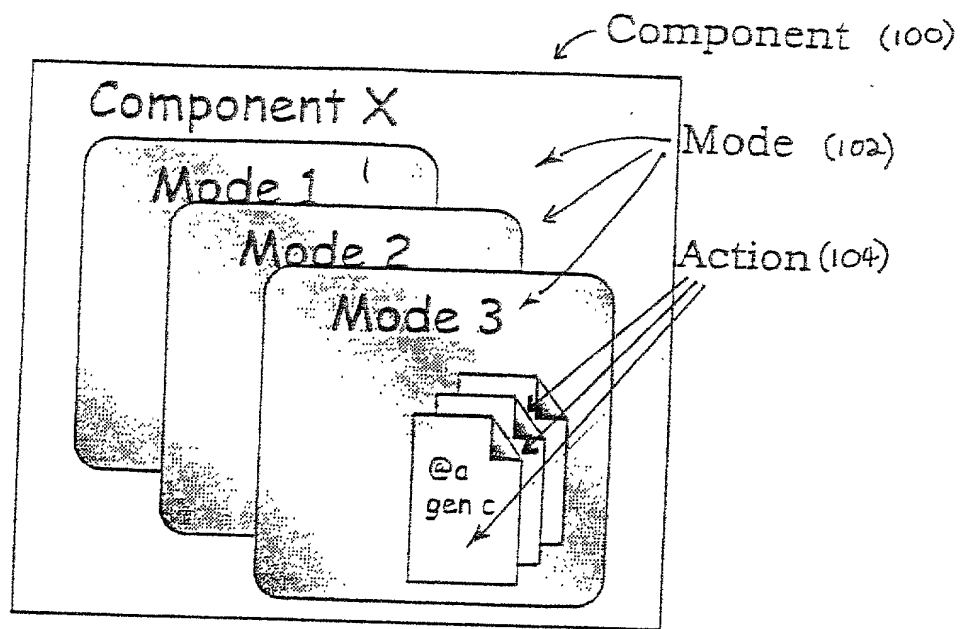


Figure 1

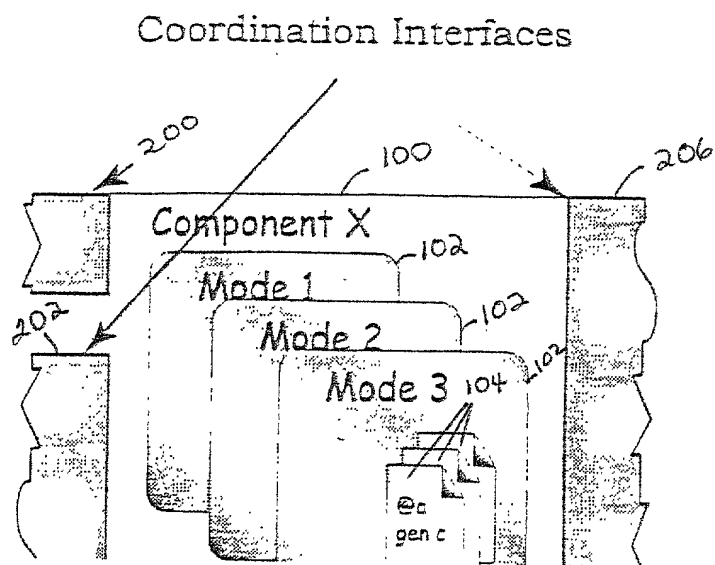


Figure 2

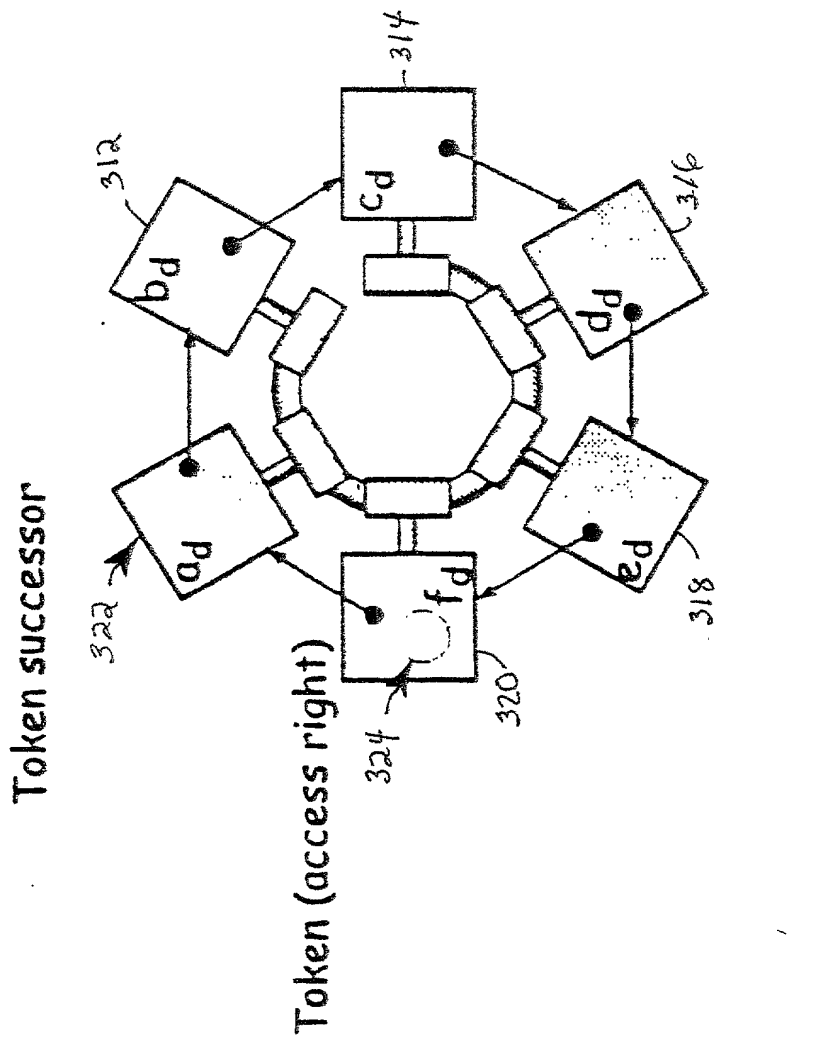


Figure 3A

Figure 3B

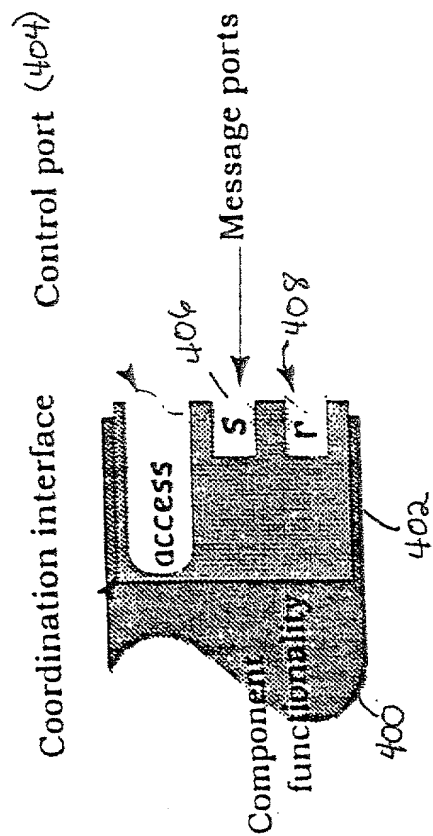


Figure 4A

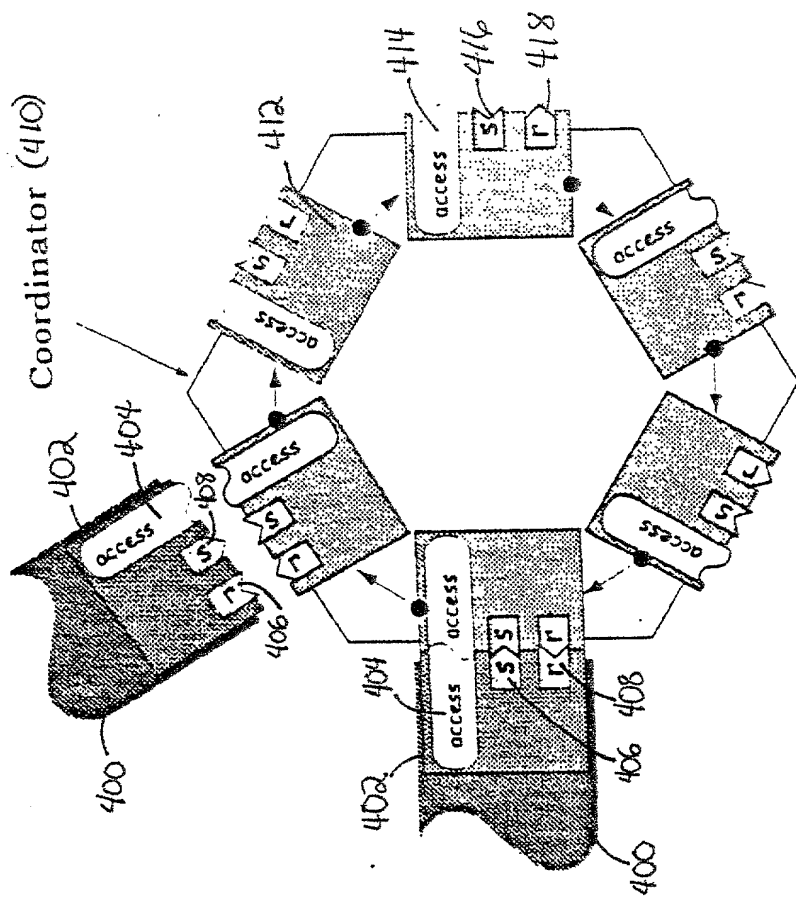


Figure 4B

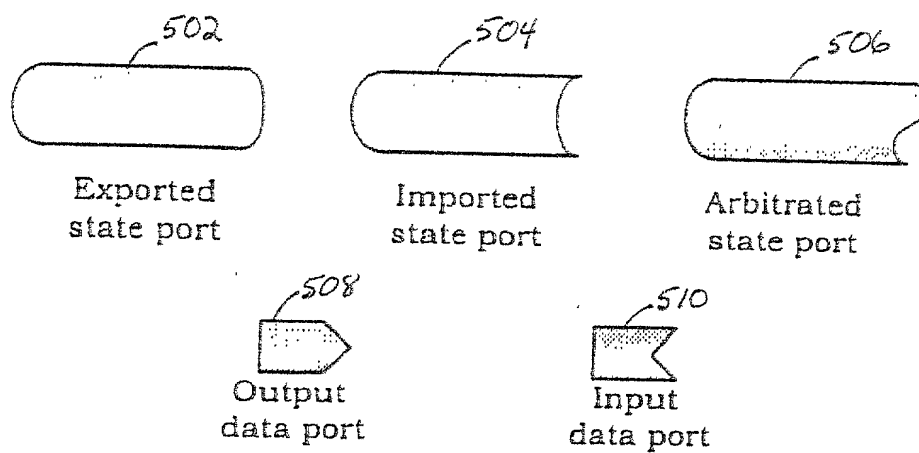


Figure 5

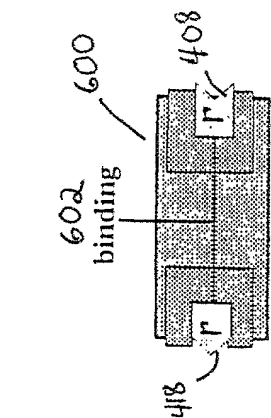


Figure 6A

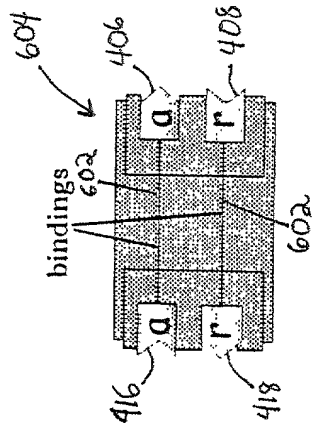


Figure 6B

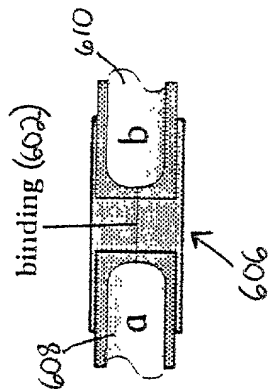


Figure 6C

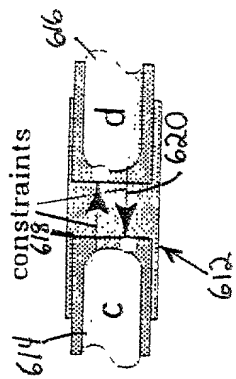


Figure 6D

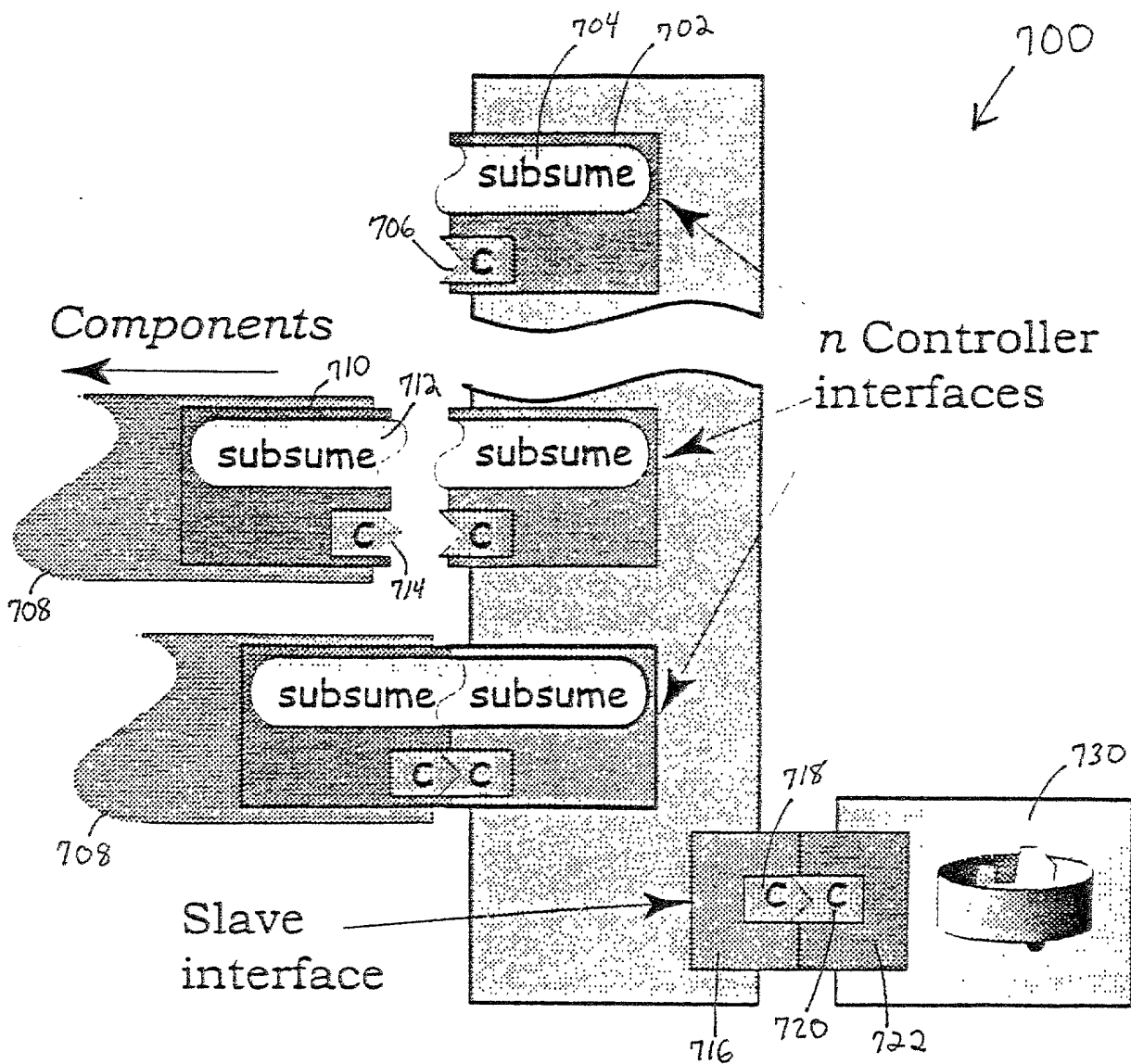


Figure 7

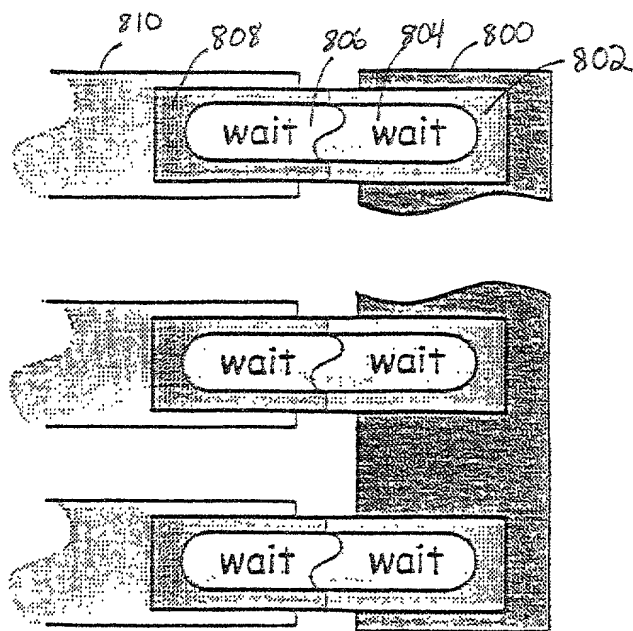


Figure 8

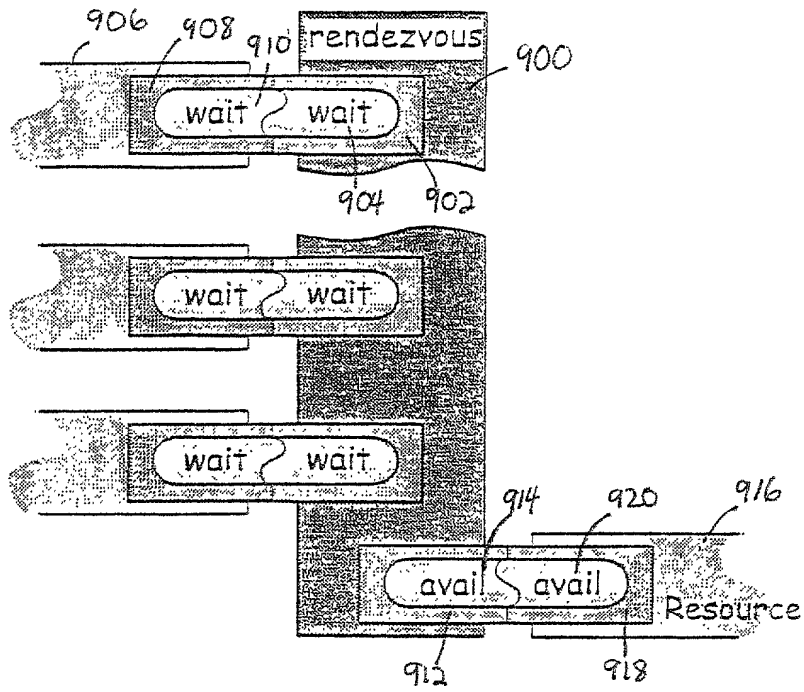


Figure 9

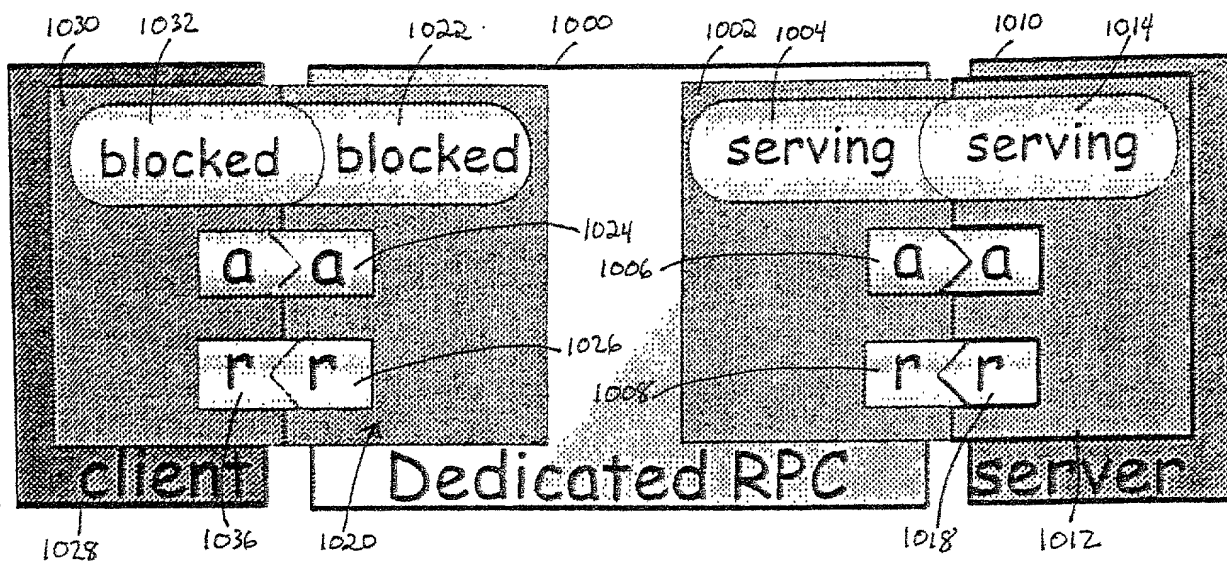


Figure 10

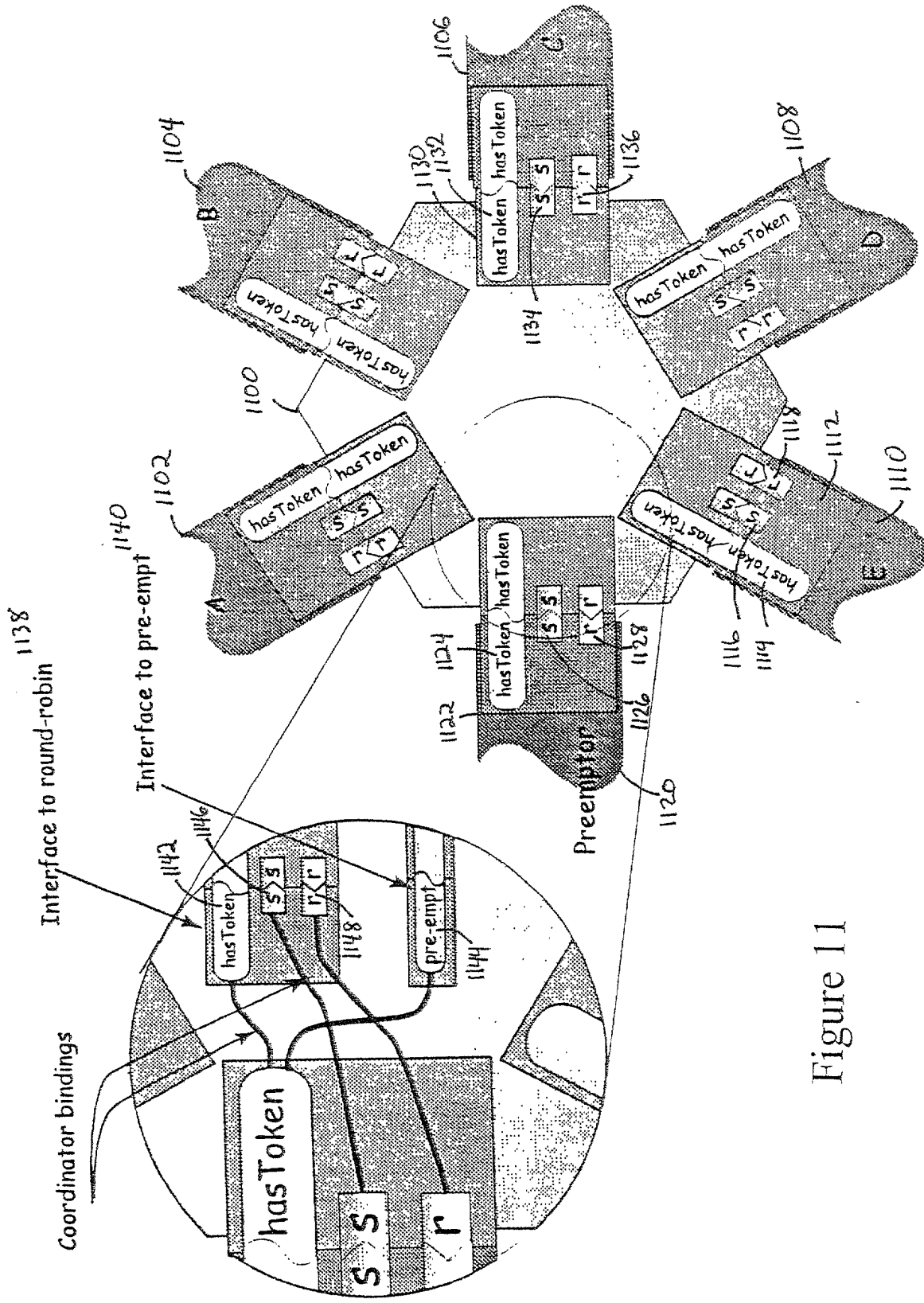


Figure 11

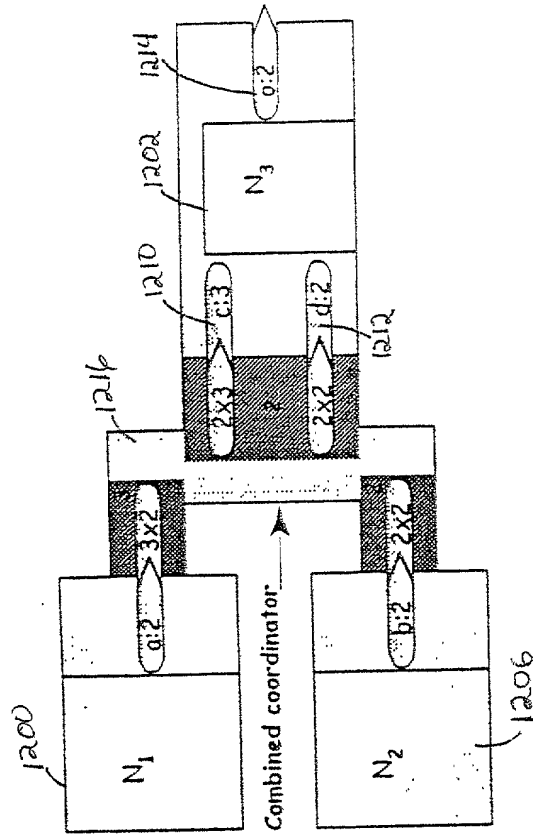


Figure 12A

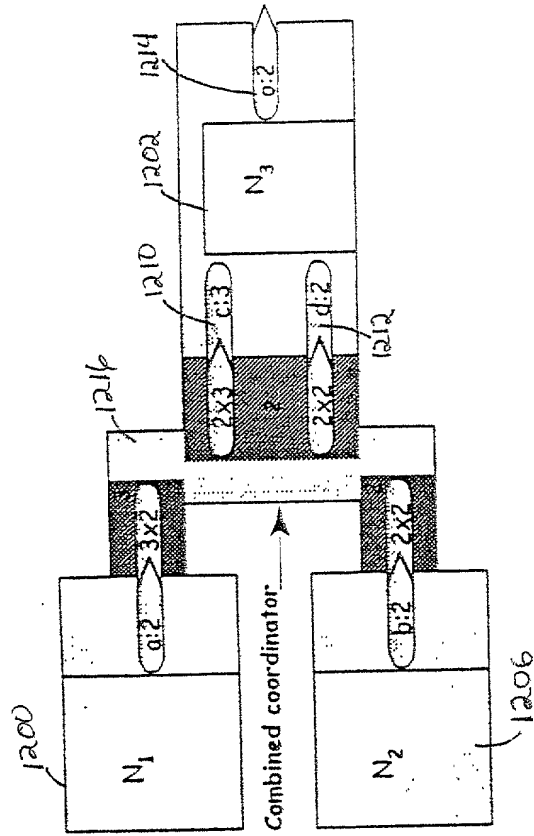


Figure 12B

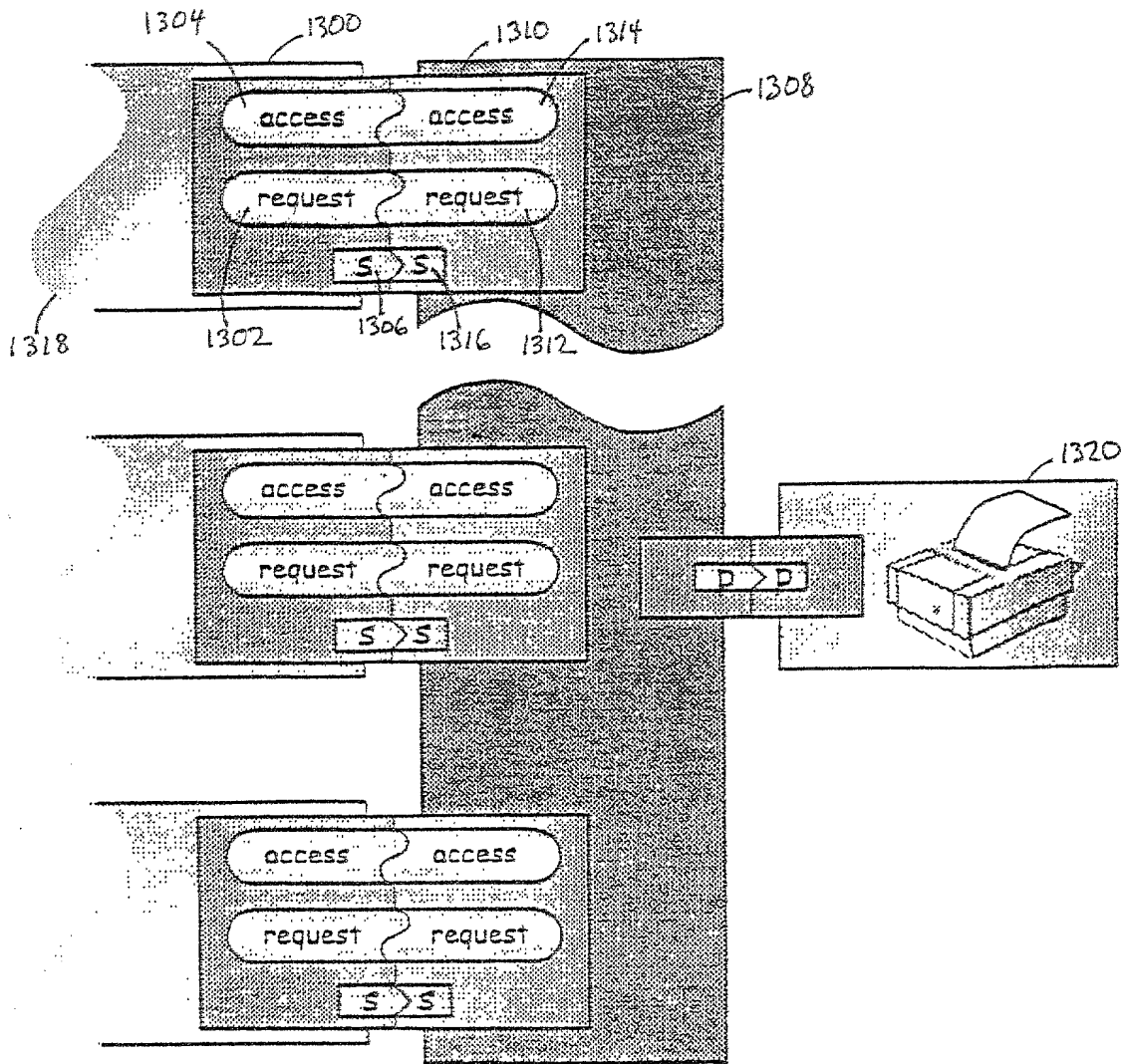


Figure 13

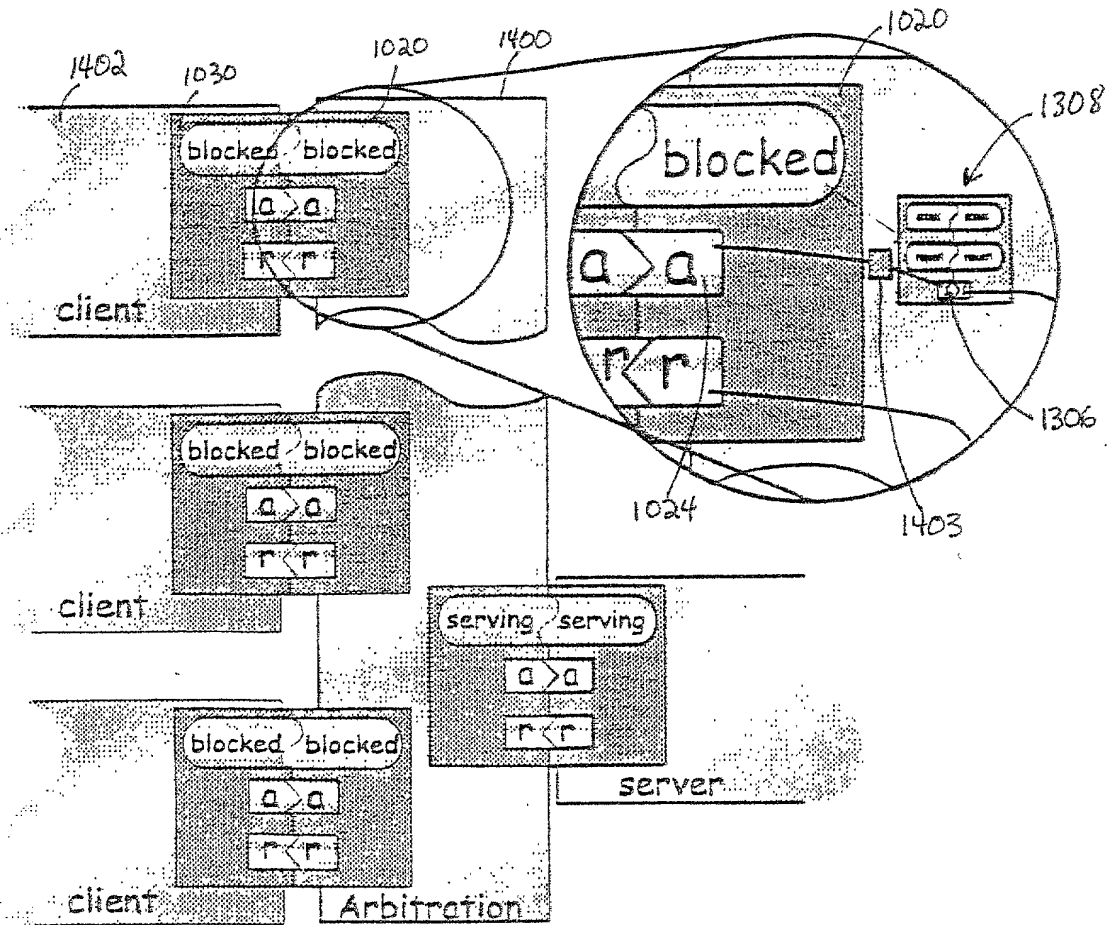


Figure 14

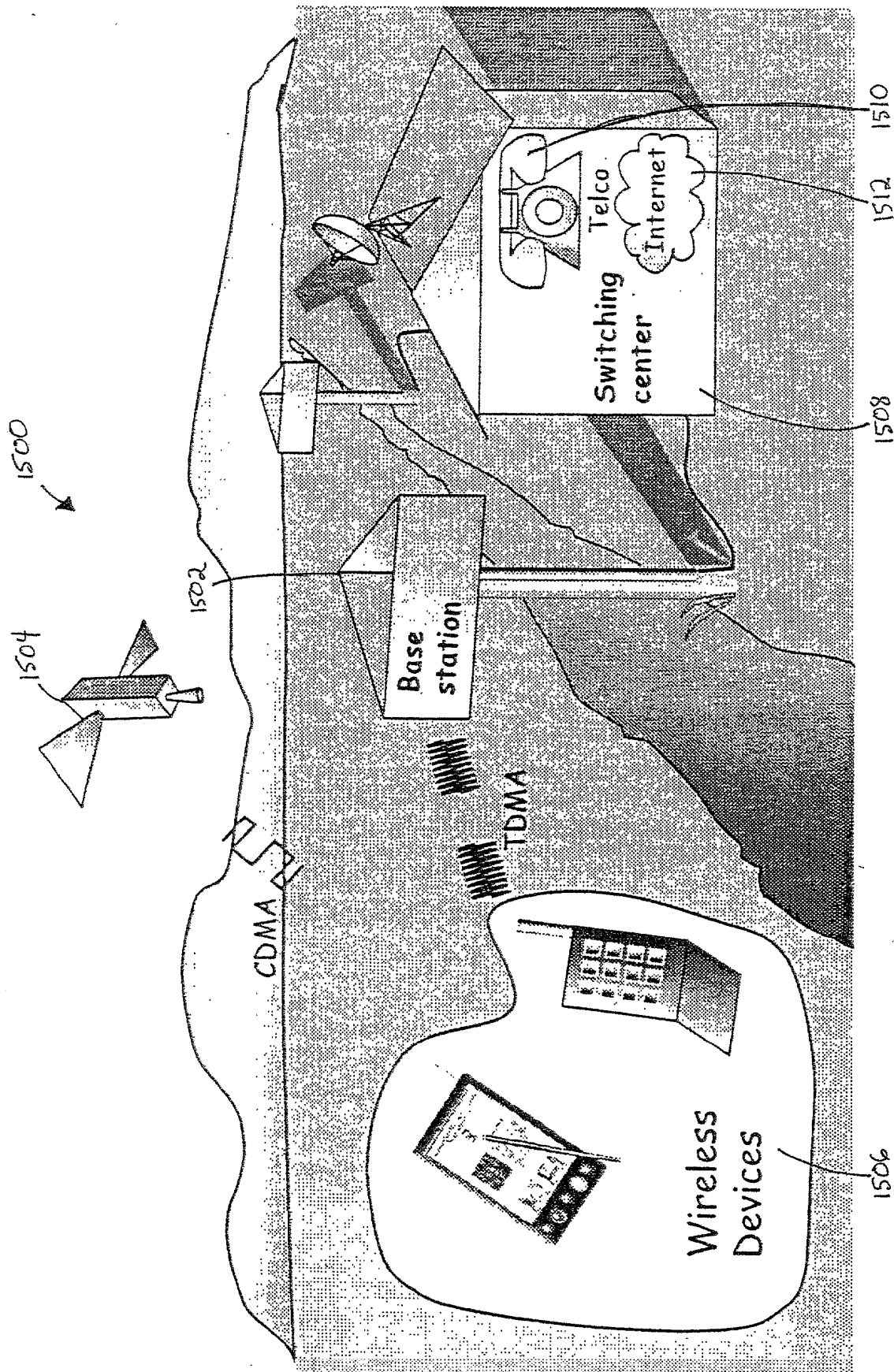


Figure 15

09888082-062201

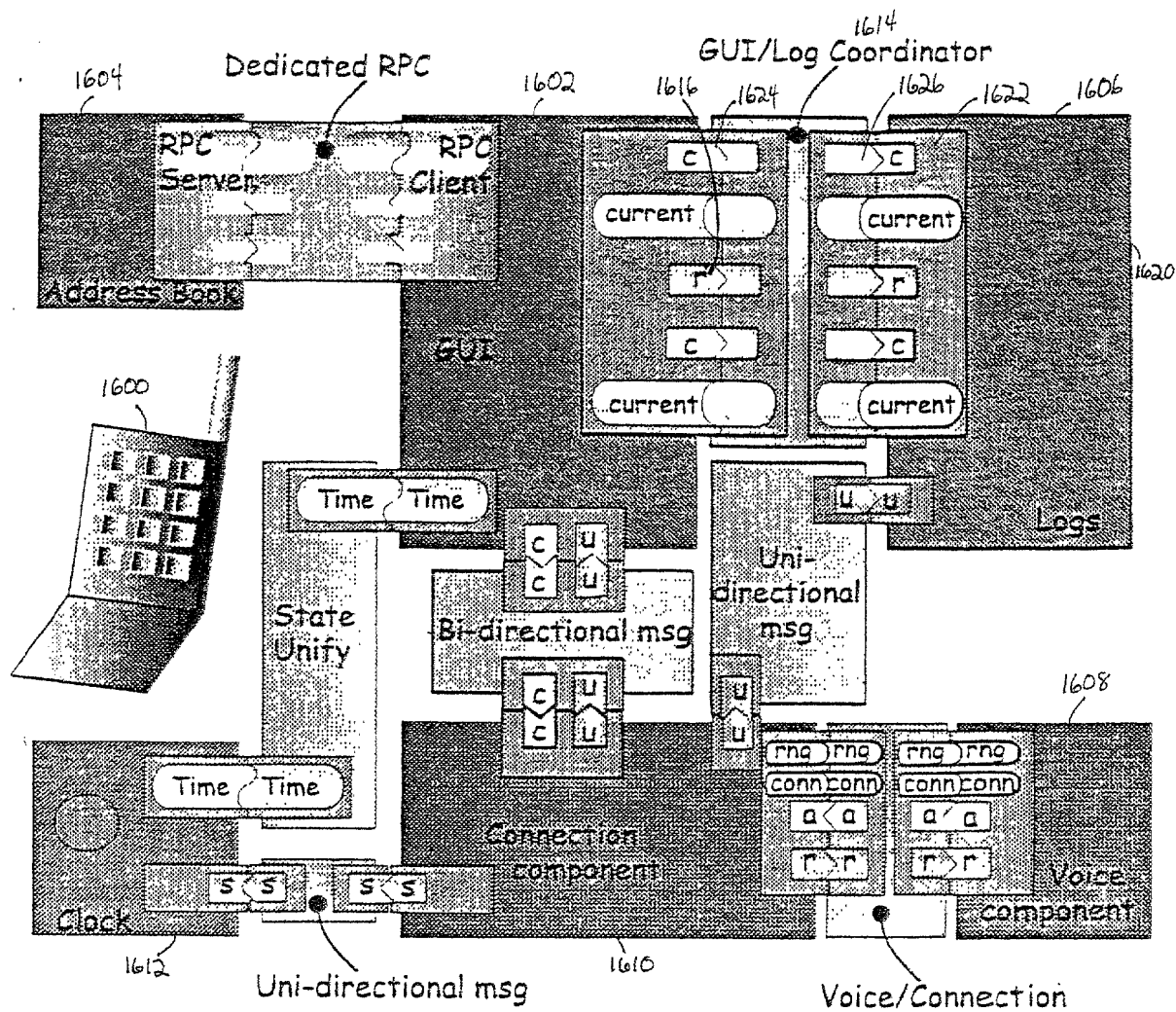


Figure 16

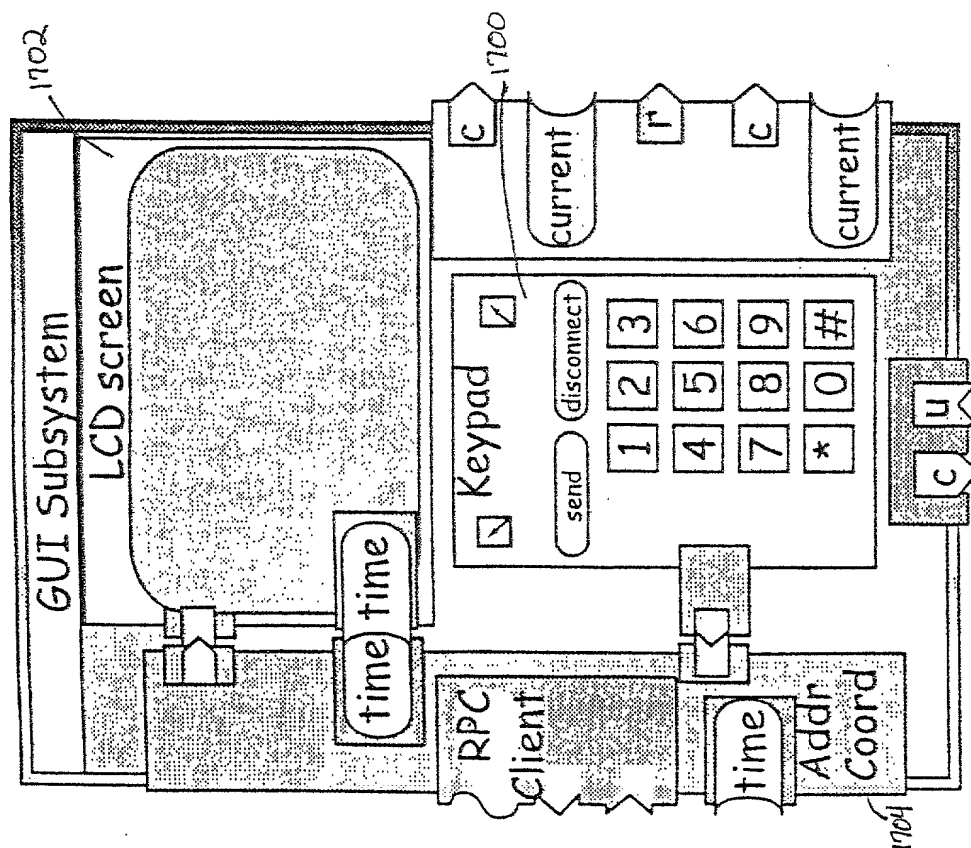


Figure 17A

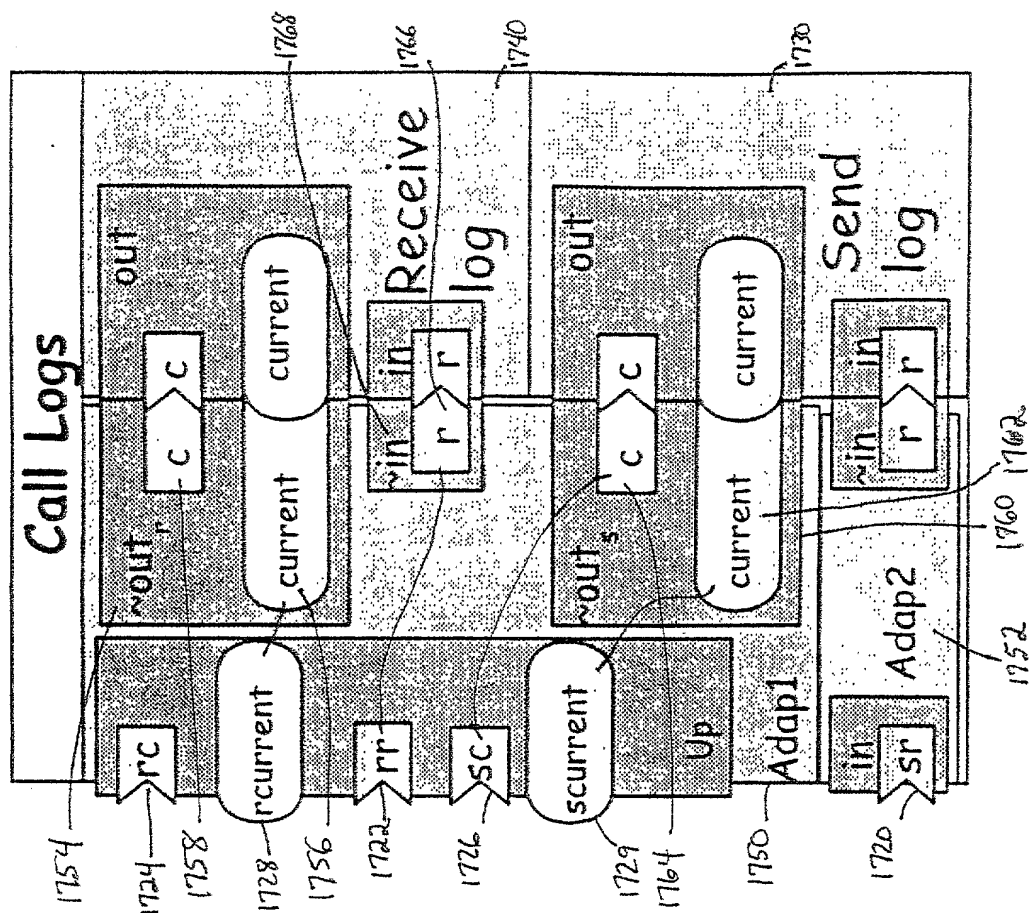


Figure 17B

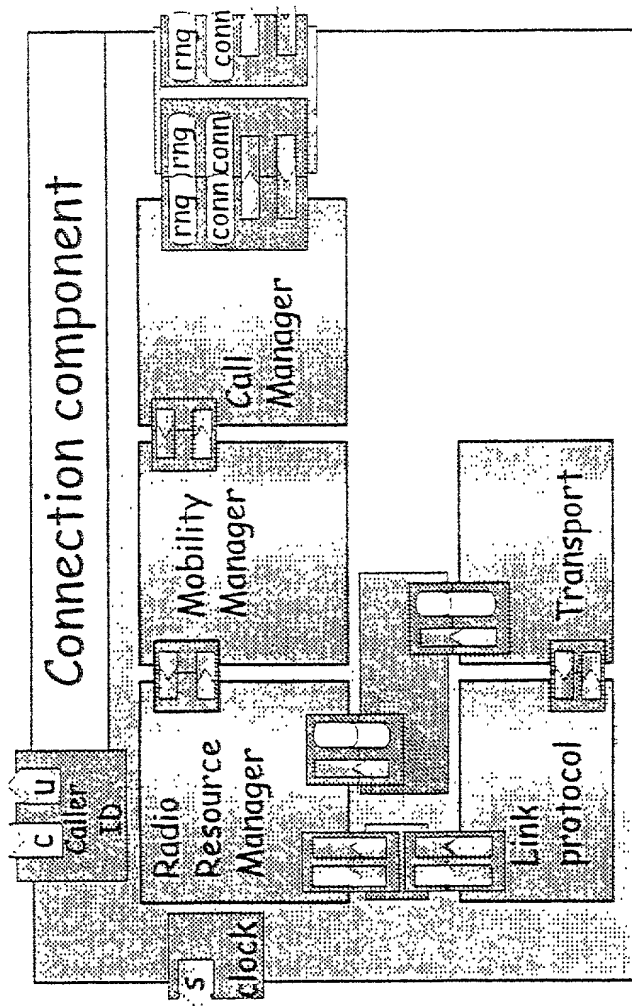


Figure 18B

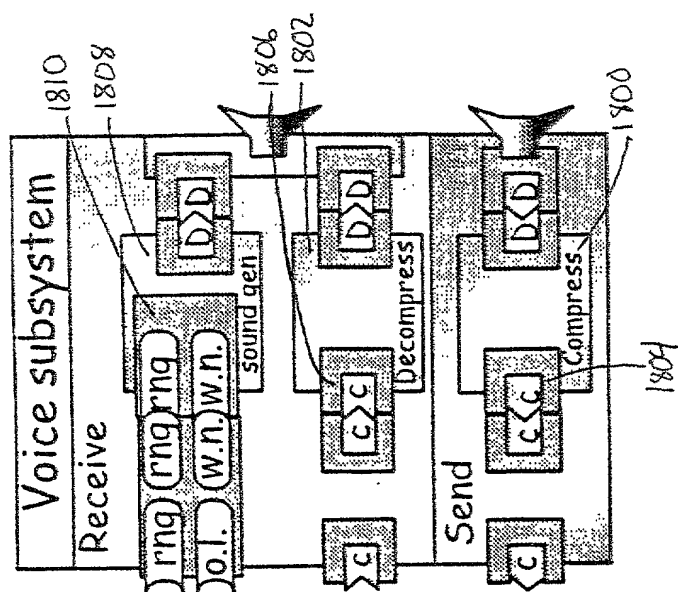


Figure 18A

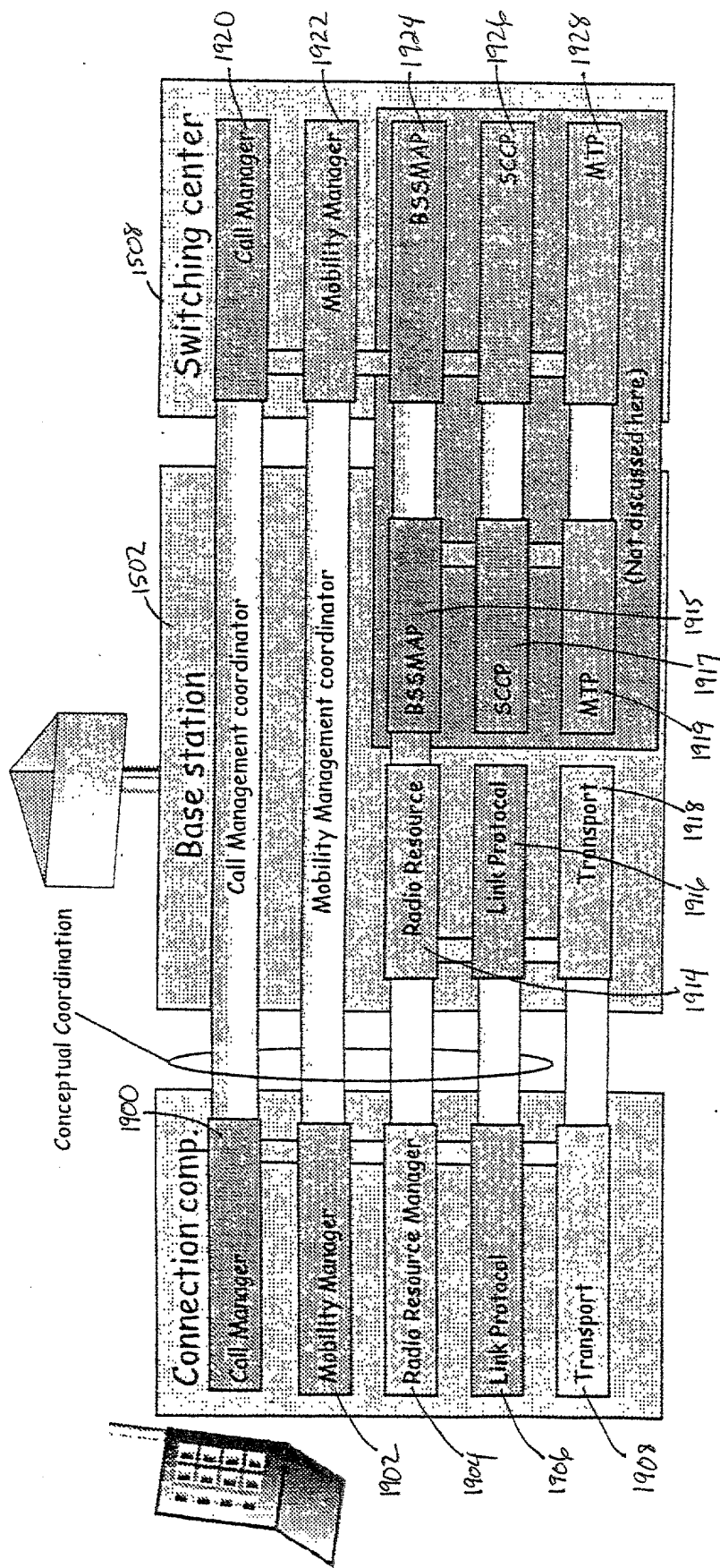


Figure 19

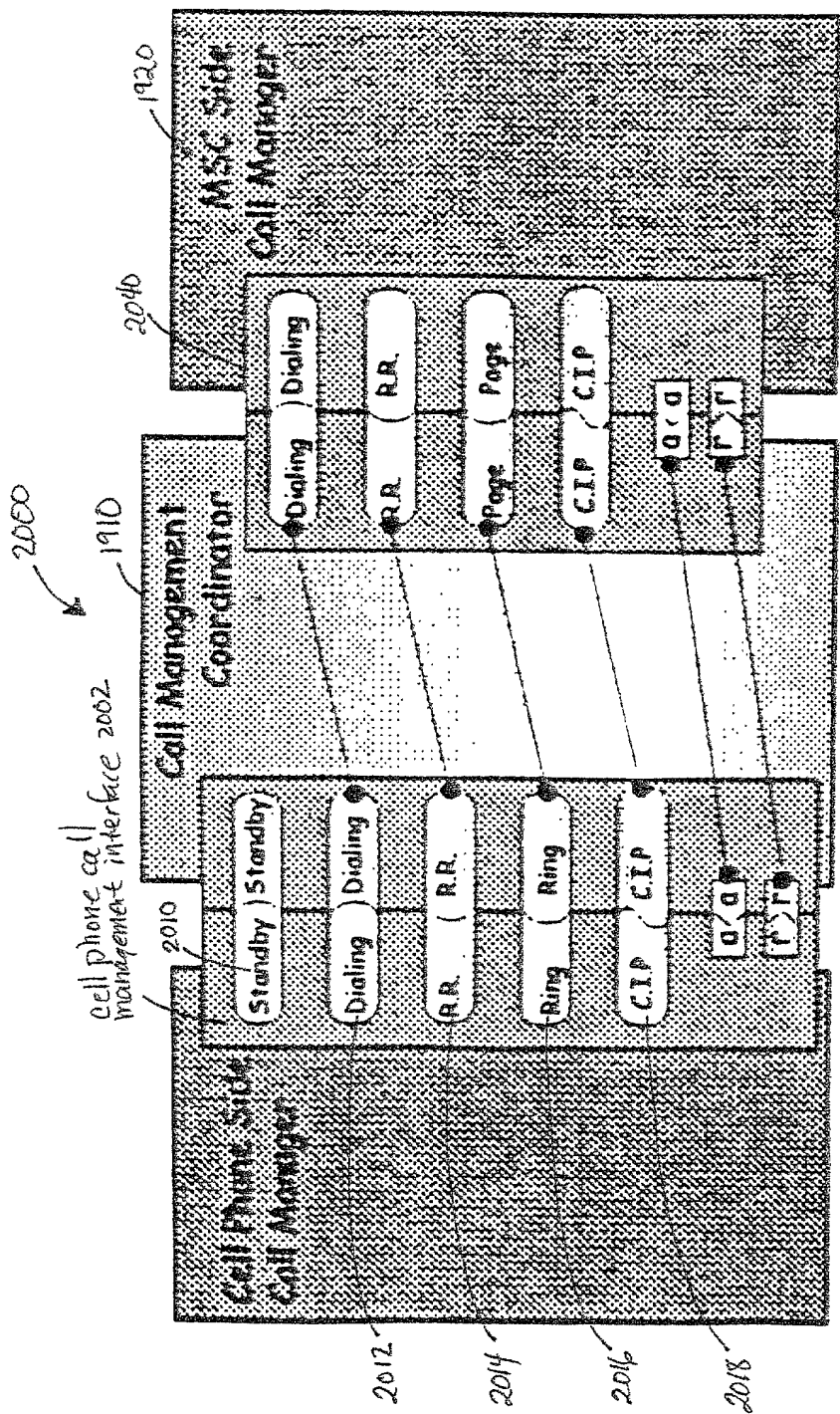


Figure 20

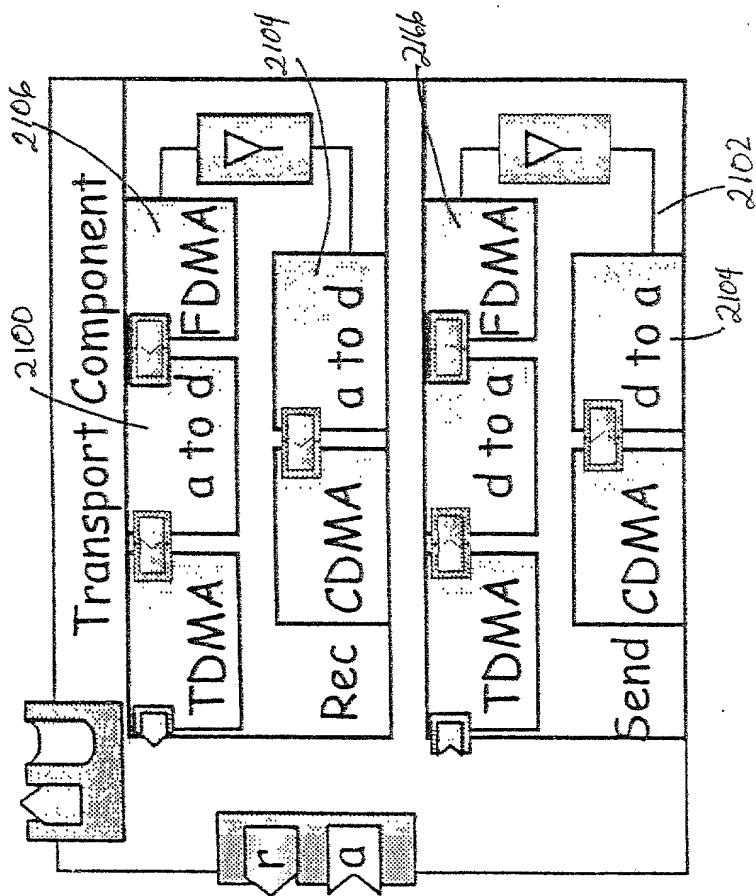


Figure 21A

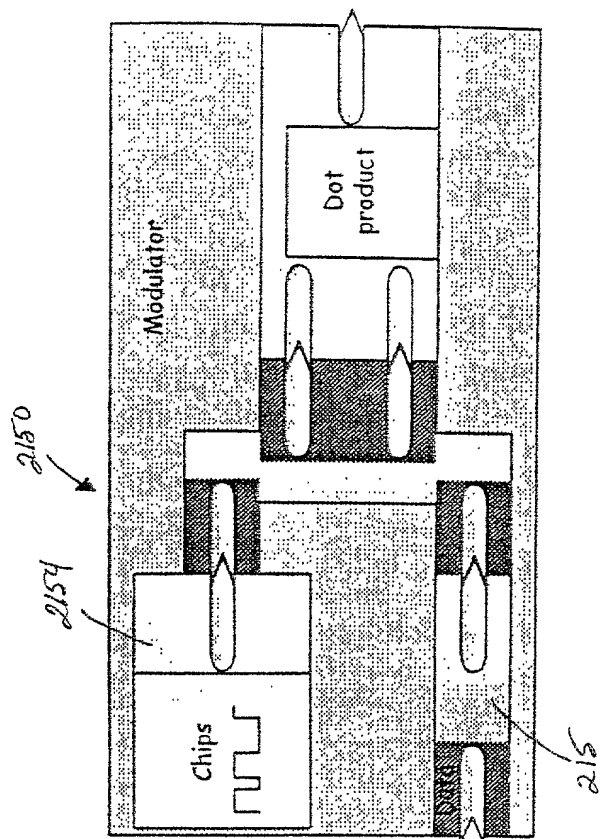


Figure 21B

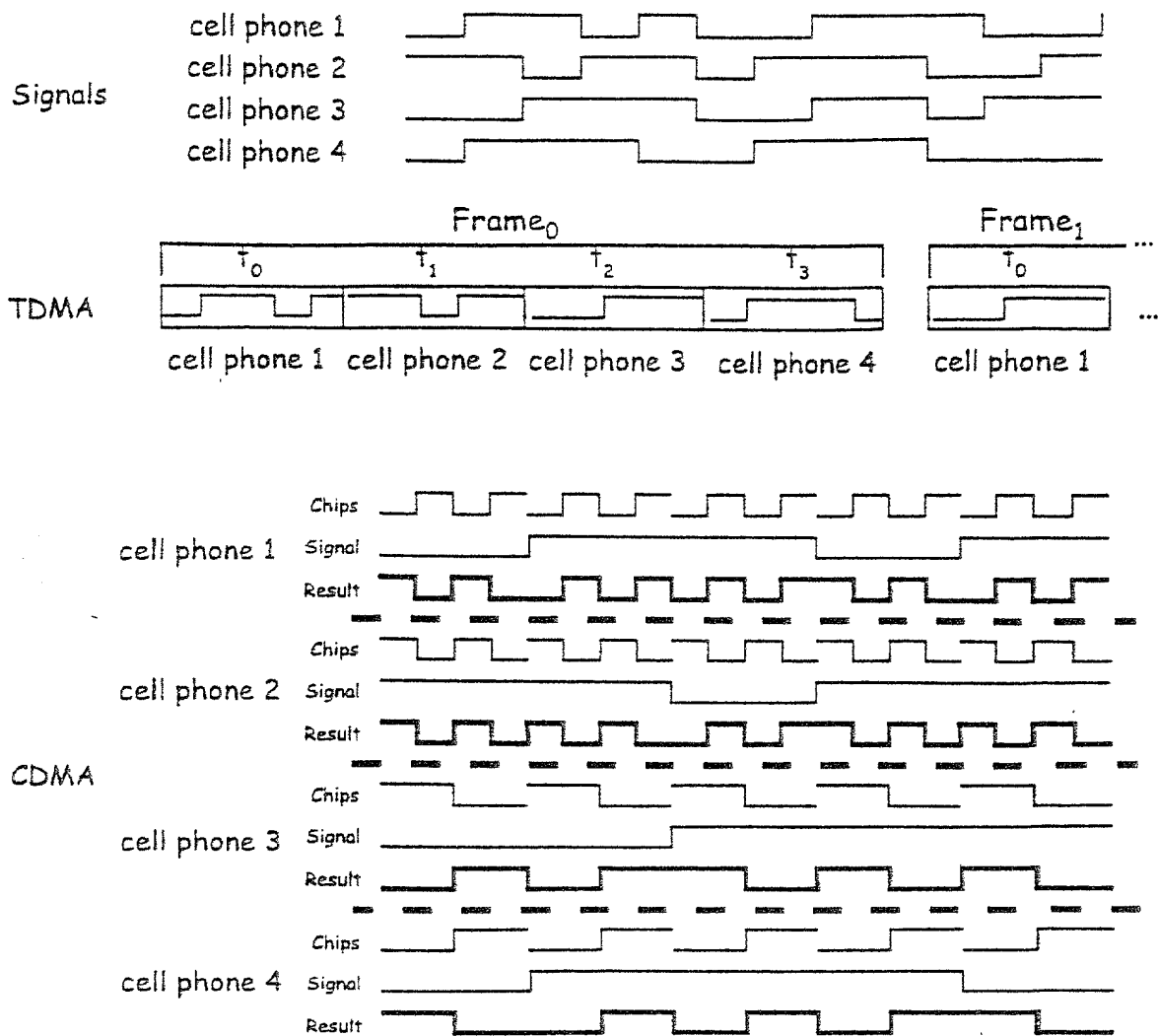


Figure 22

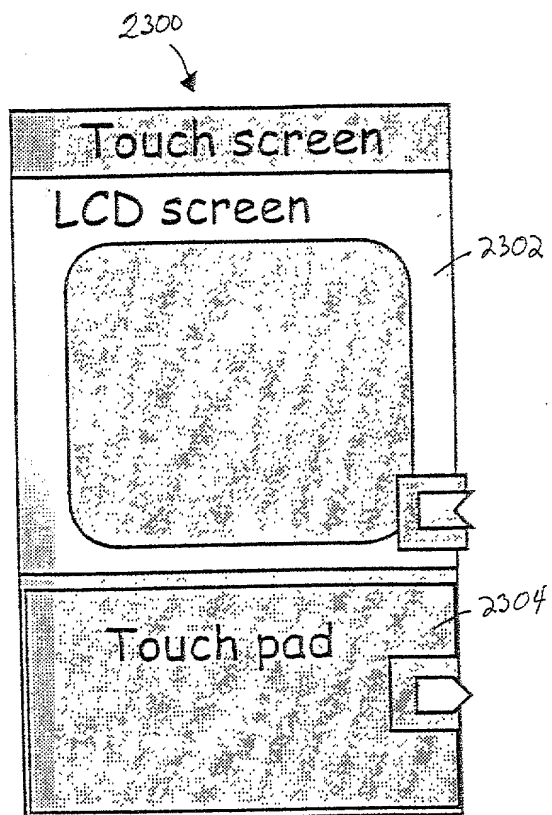


Figure 23A

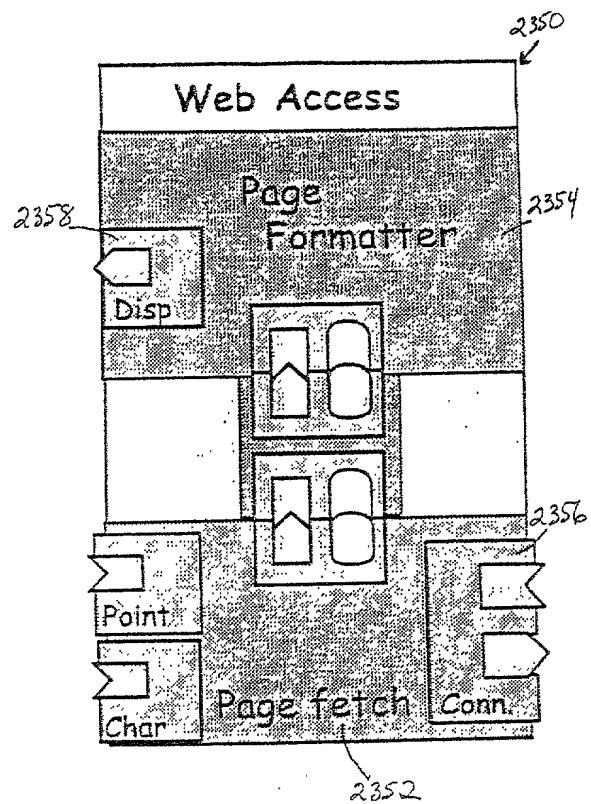


Figure 23B

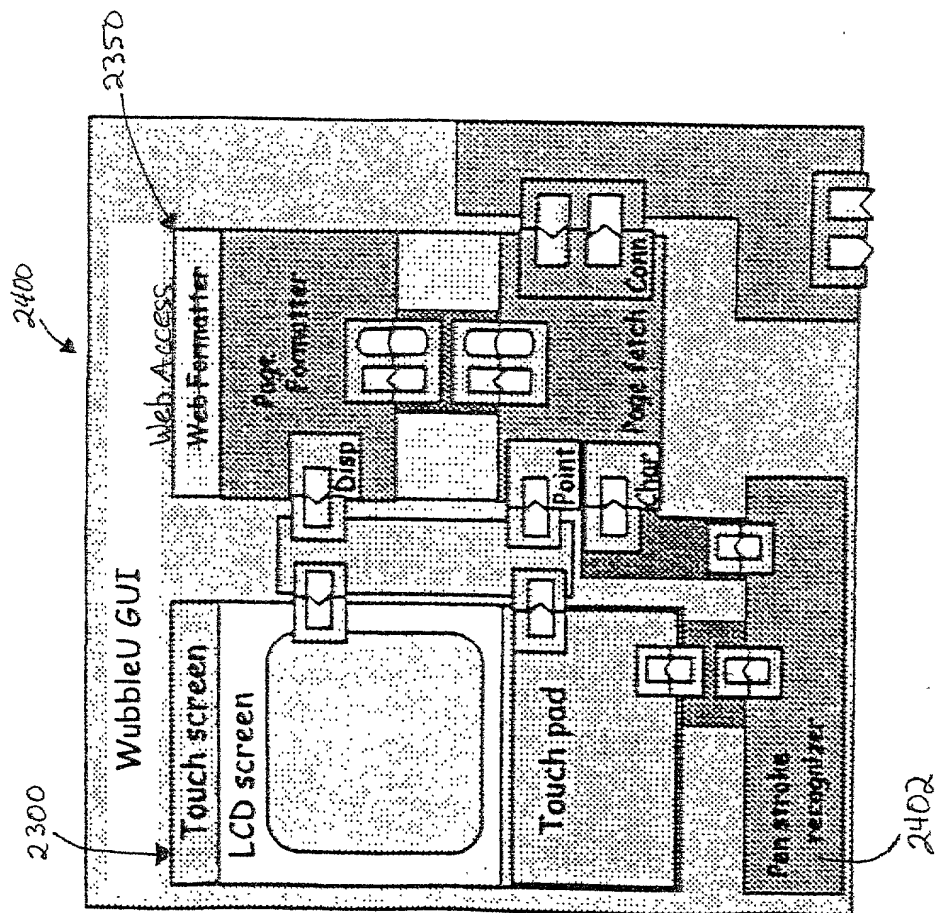


Figure 24A

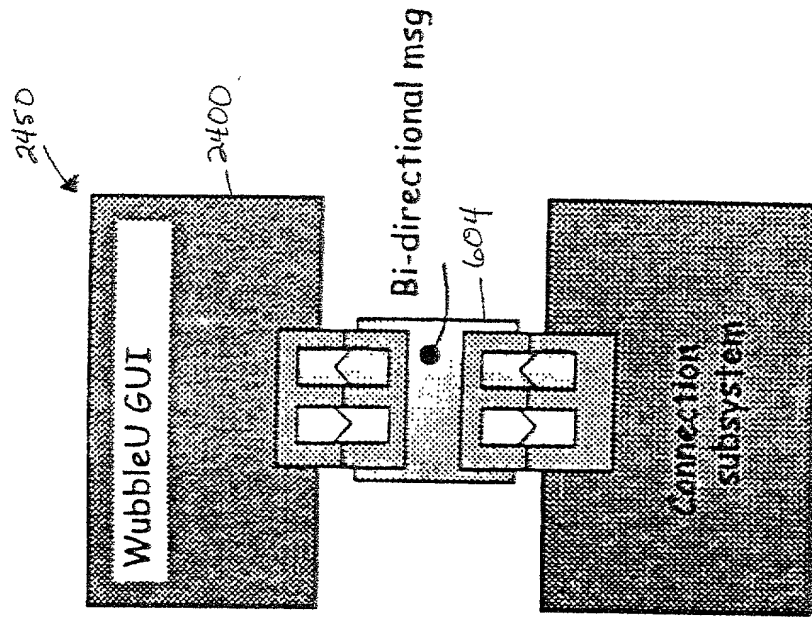


Figure 24B

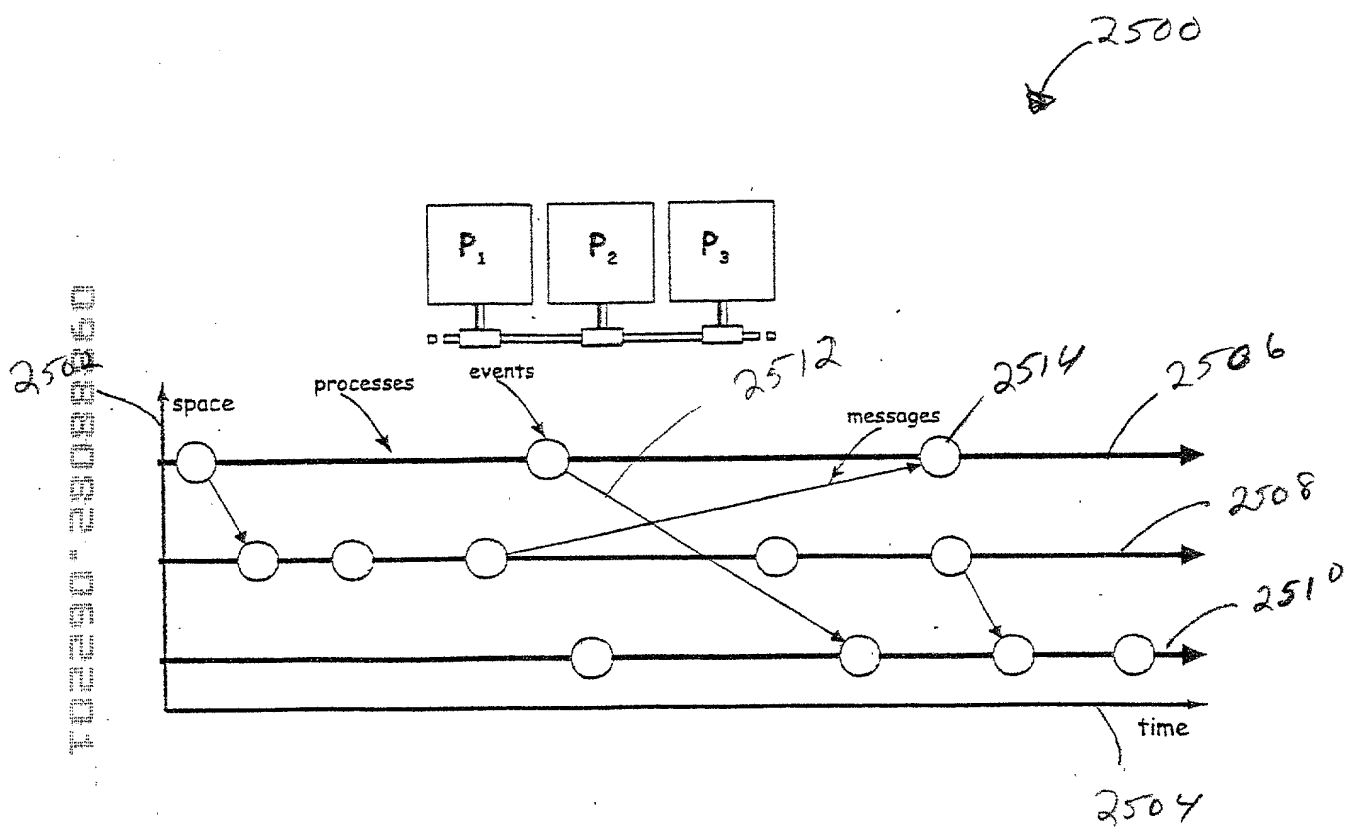


Figure 25

(prior art)

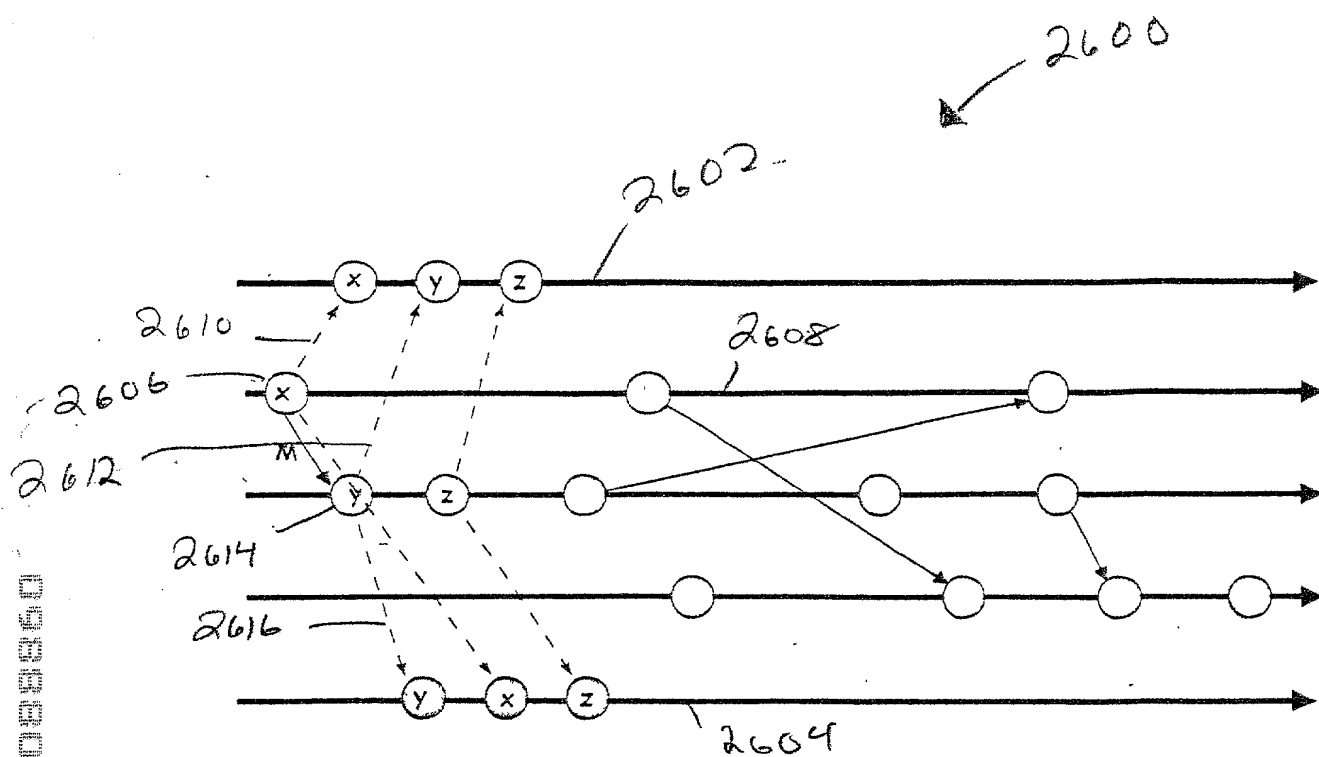


Figure 26

(prior art)

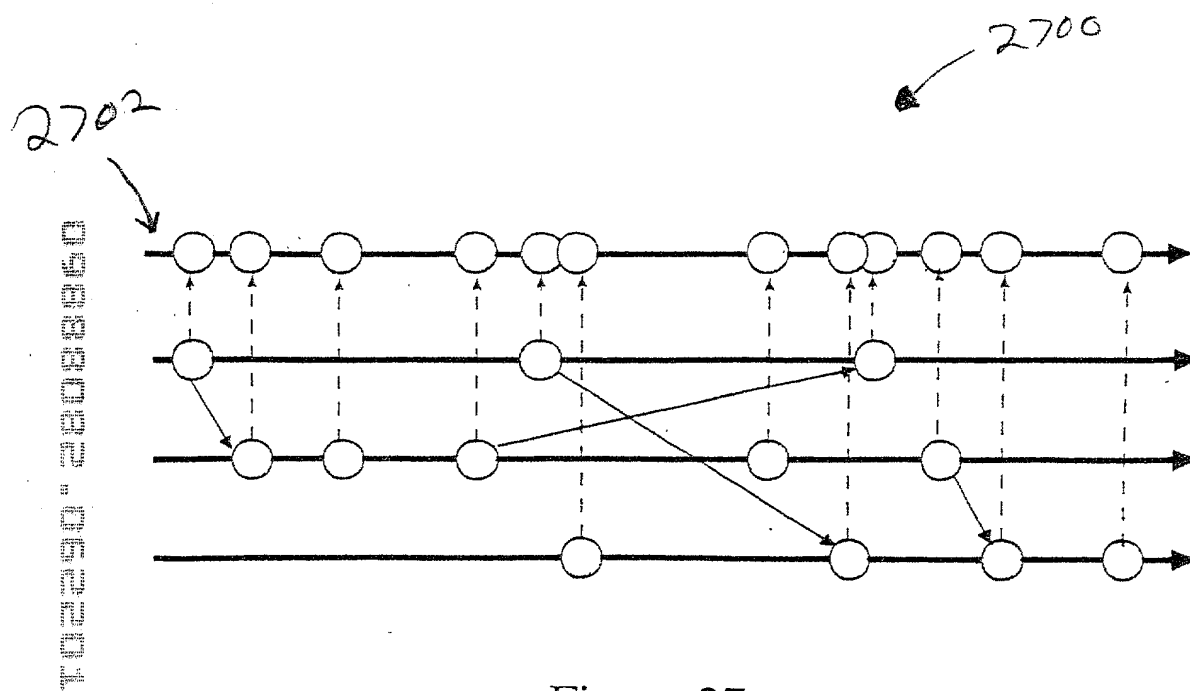


Figure 27

(prior art)

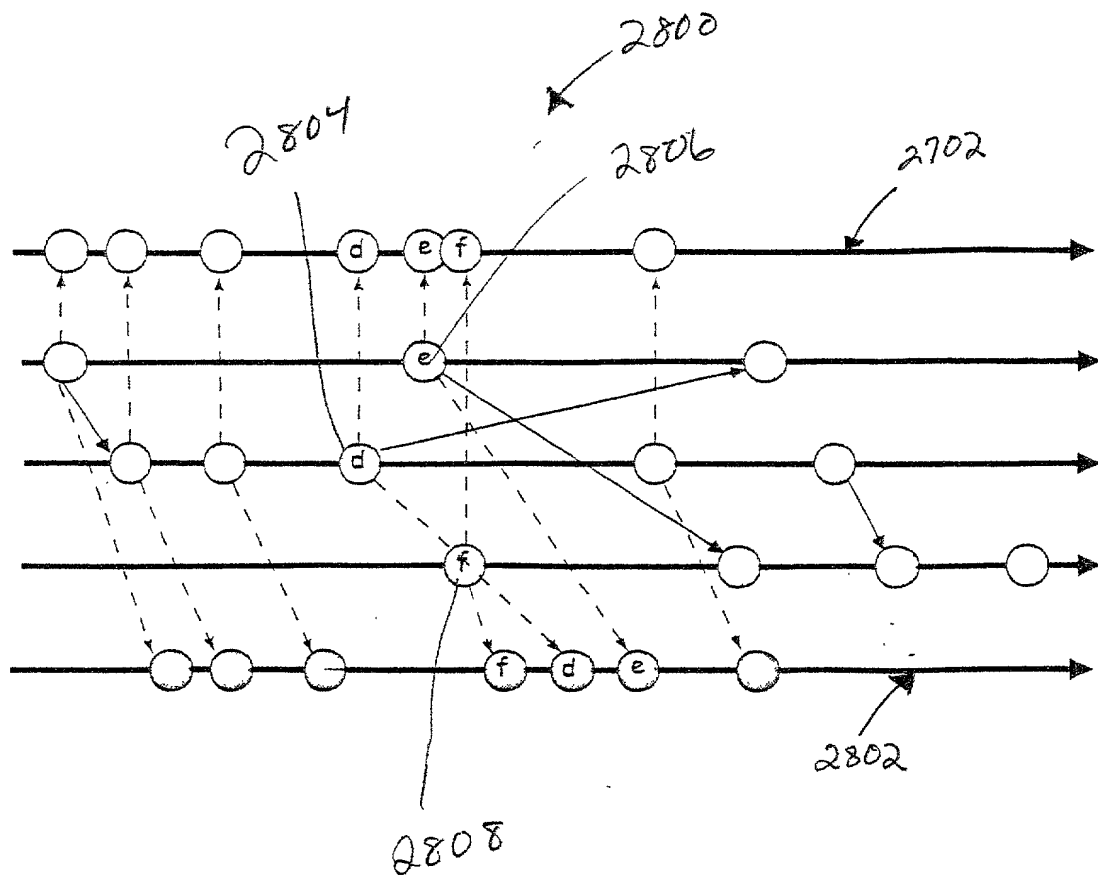


Figure 28

(prior art)

09882082.063204

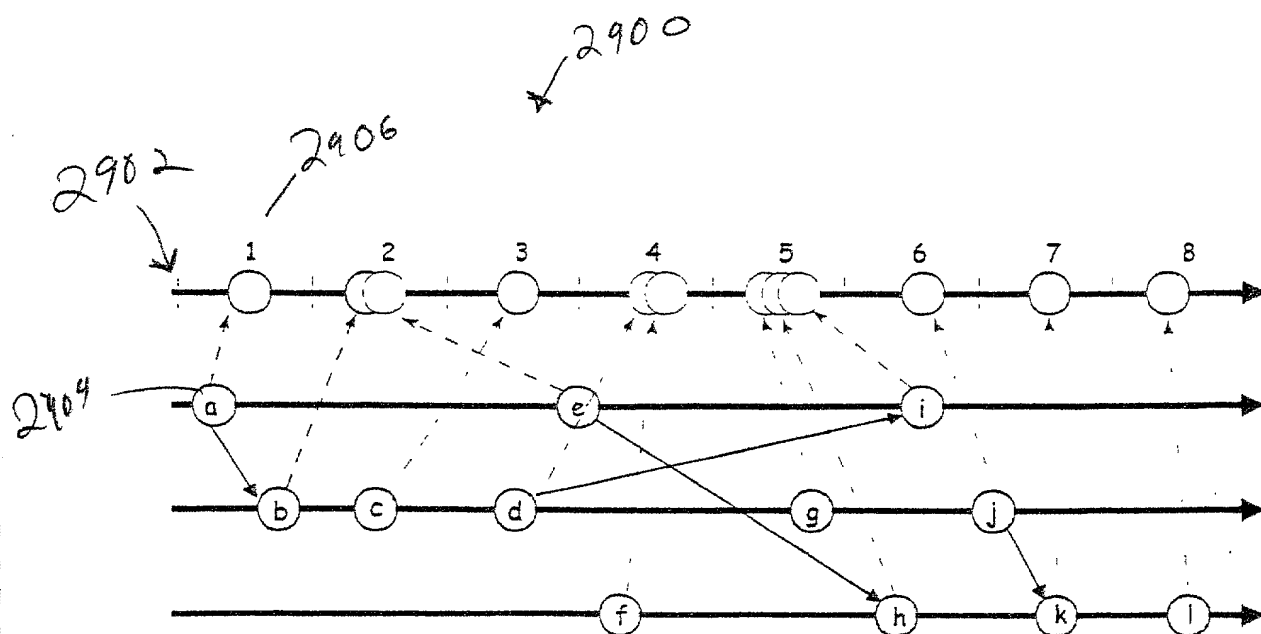


Figure 29

(prior art)

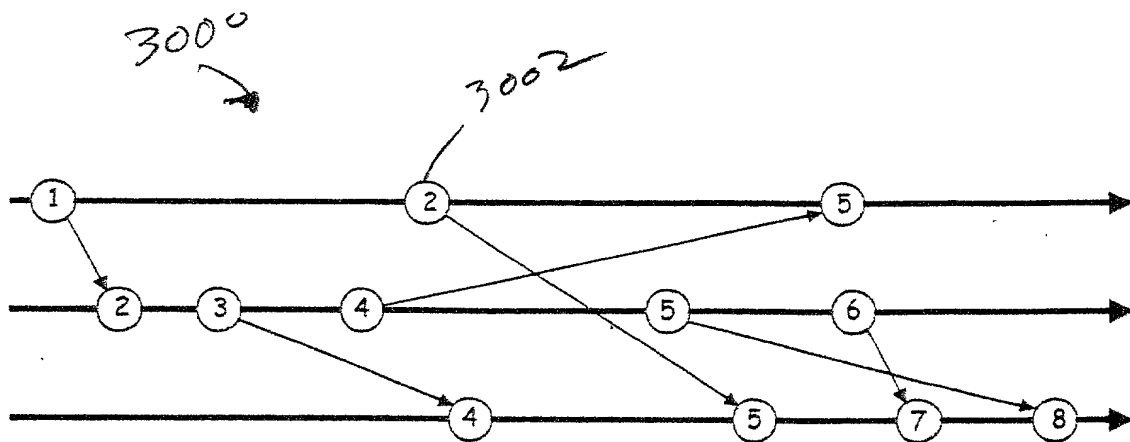


Figure 30

(prior art)

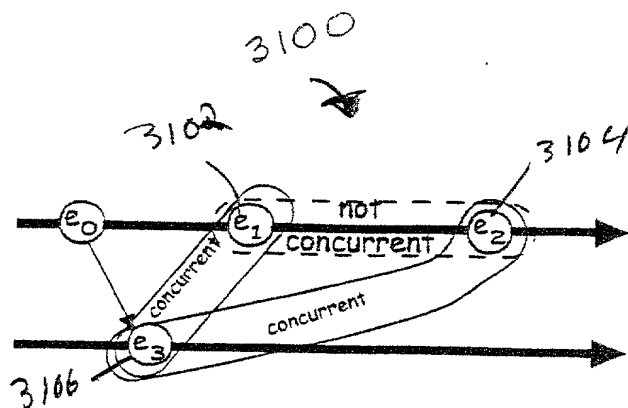


Figure 31

(prior art)

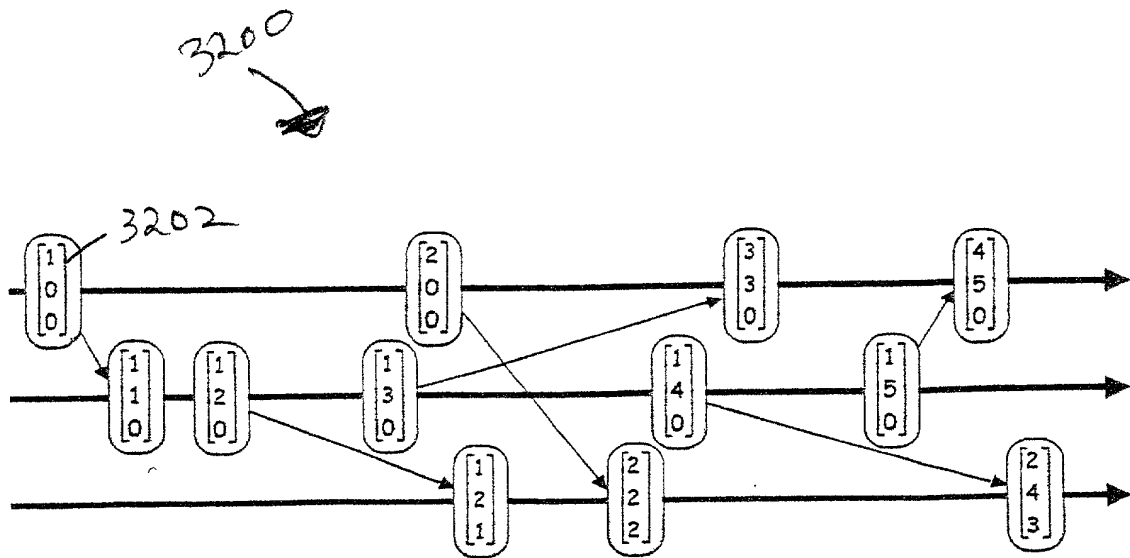


Figure 32

(prior art)

3300

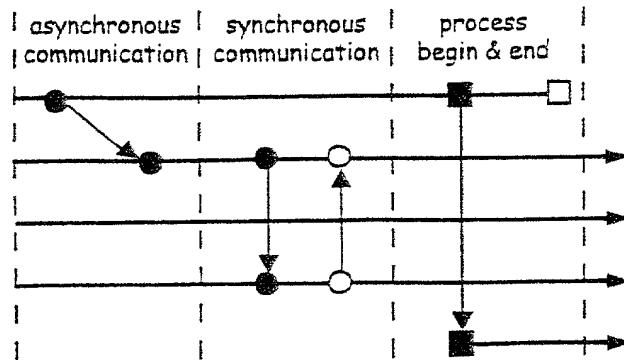


Figure 33

(prior art)

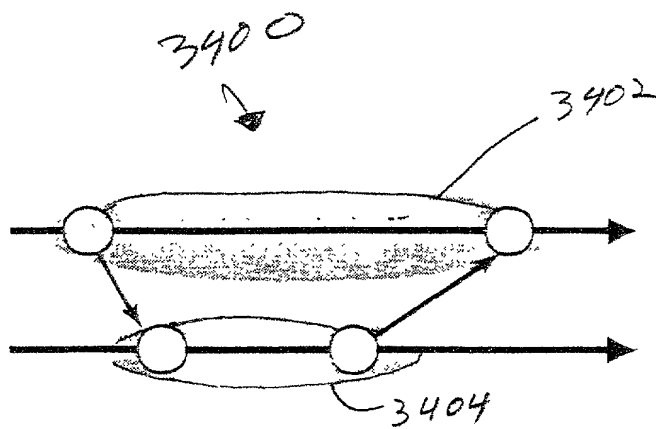


Figure 34

(prior art)

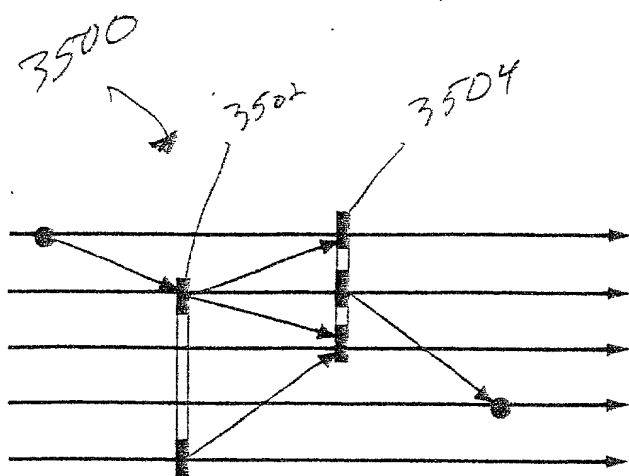


Figure 35

(prior art)

00000000-00000000

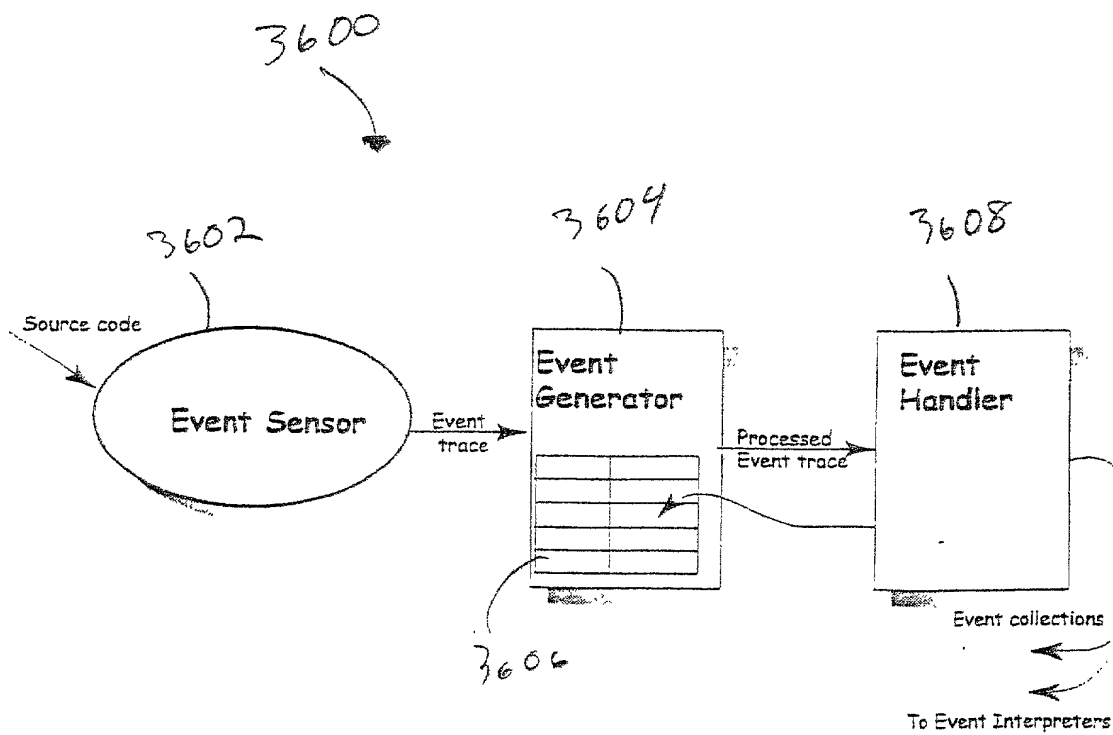


Figure 36

(prior art)

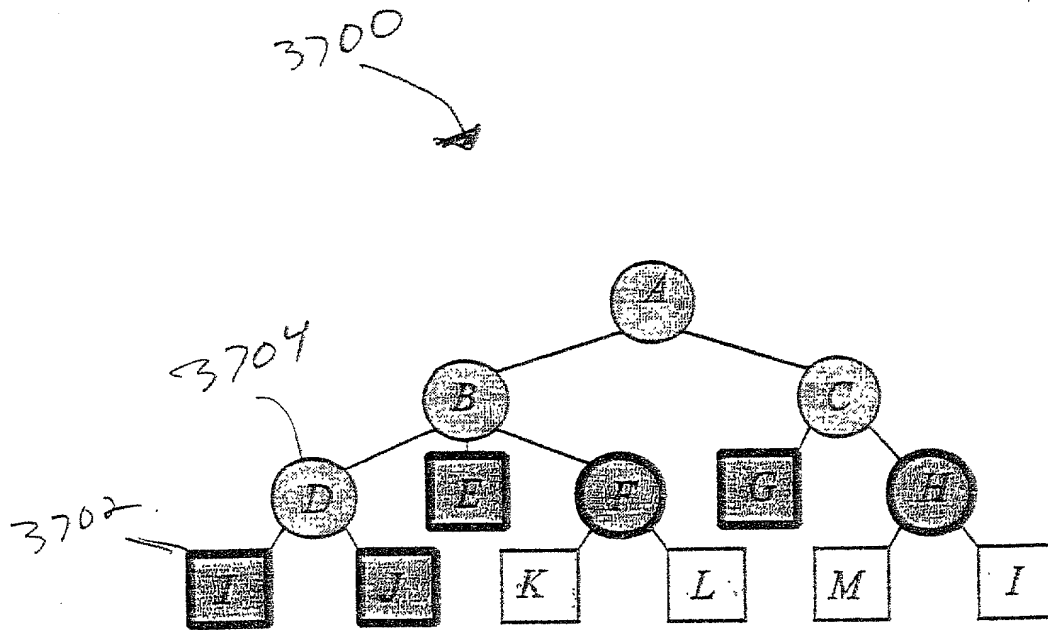
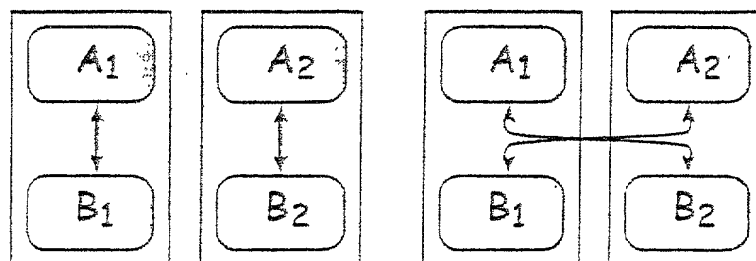


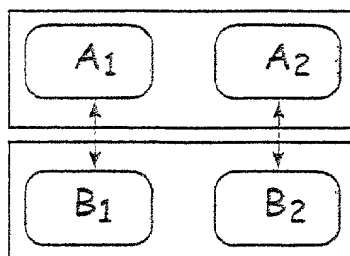
Figure 37

(prior art)



(a) Cohesion(P) = 1.0
Coupling(P) = 0.5

(b) Cohesion(P) = 0.0
Coupling(P) = 1.0



(c) Cohesion(P) = 1.0
Coupling(P) = 0.5

Figure 38

(prior art)

102290 2808860 0988082 062201

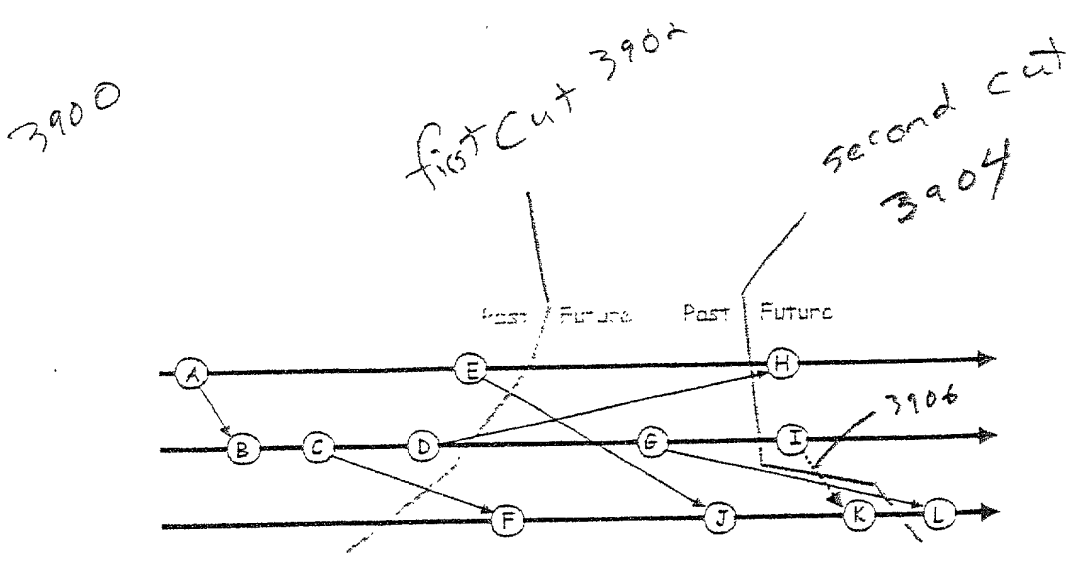
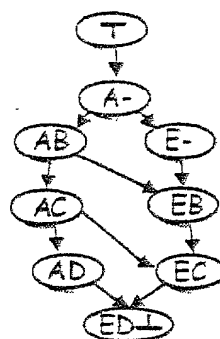
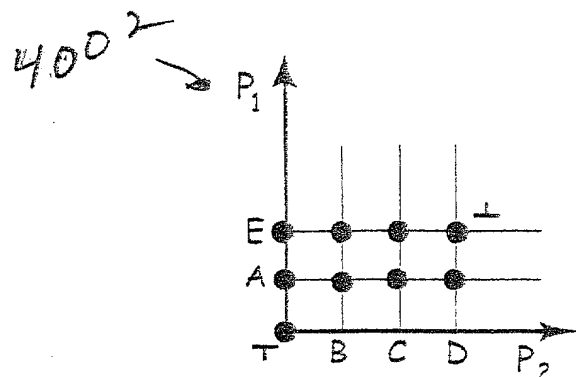


Figure 39

(prior art)

The diagram shows two horizontal lines representing DNA molecules. The top line is labeled P_1 and contains two circles labeled A and E. The bottom line is labeled P_2 and contains three circles labeled B, C, and D. An arrow points from the space between A and E on the P_1 line down to the space between B and C on the P_2 line, indicating a recombination event. A second arrow points from the space between A and B on the P_2 line up to the space between A and E on the P_1 line, indicating the formation of a recombinant molecule with markers A, C, and D.



(prior art)

0938082-062204

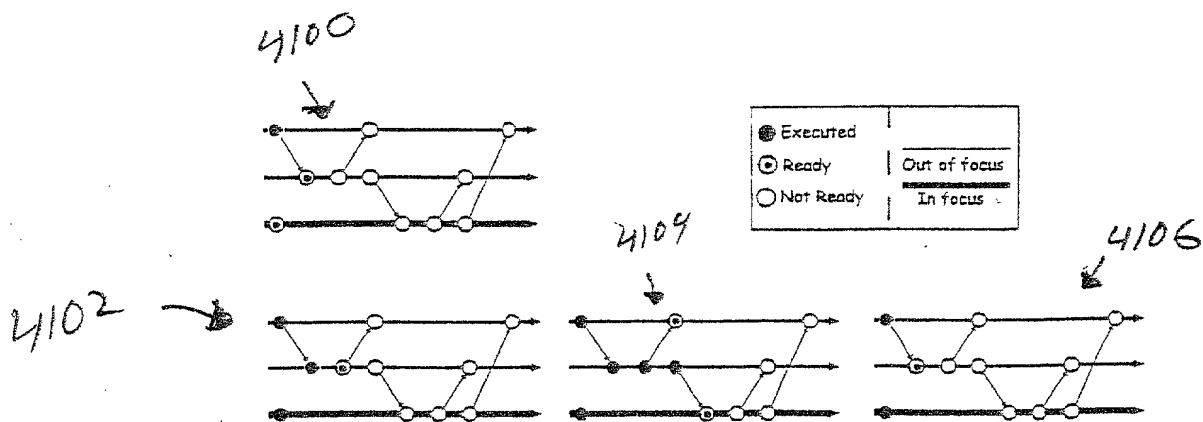


Figure 41

(prior art)

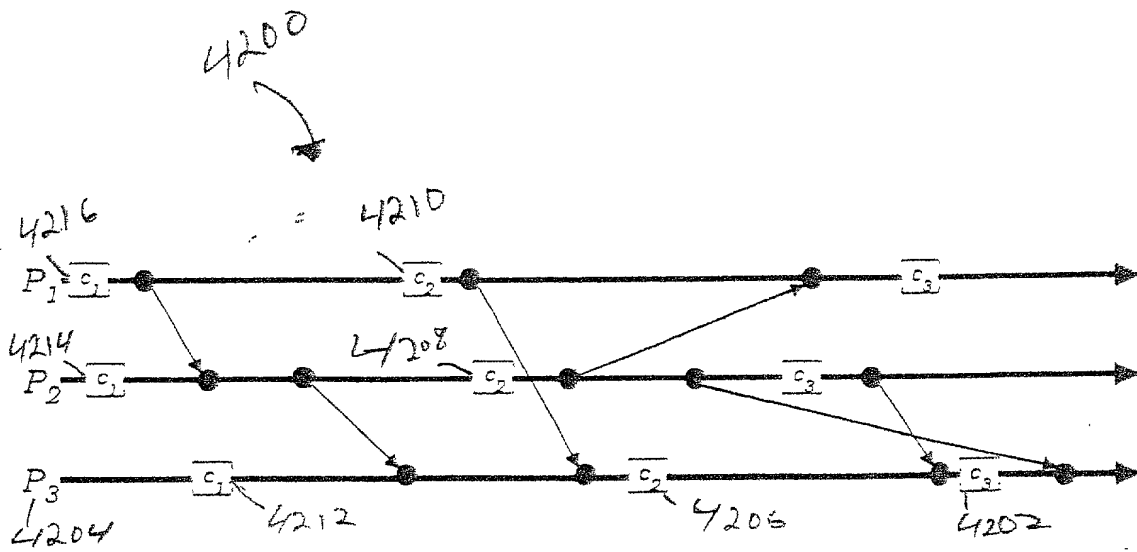


Figure 42

(prior art)

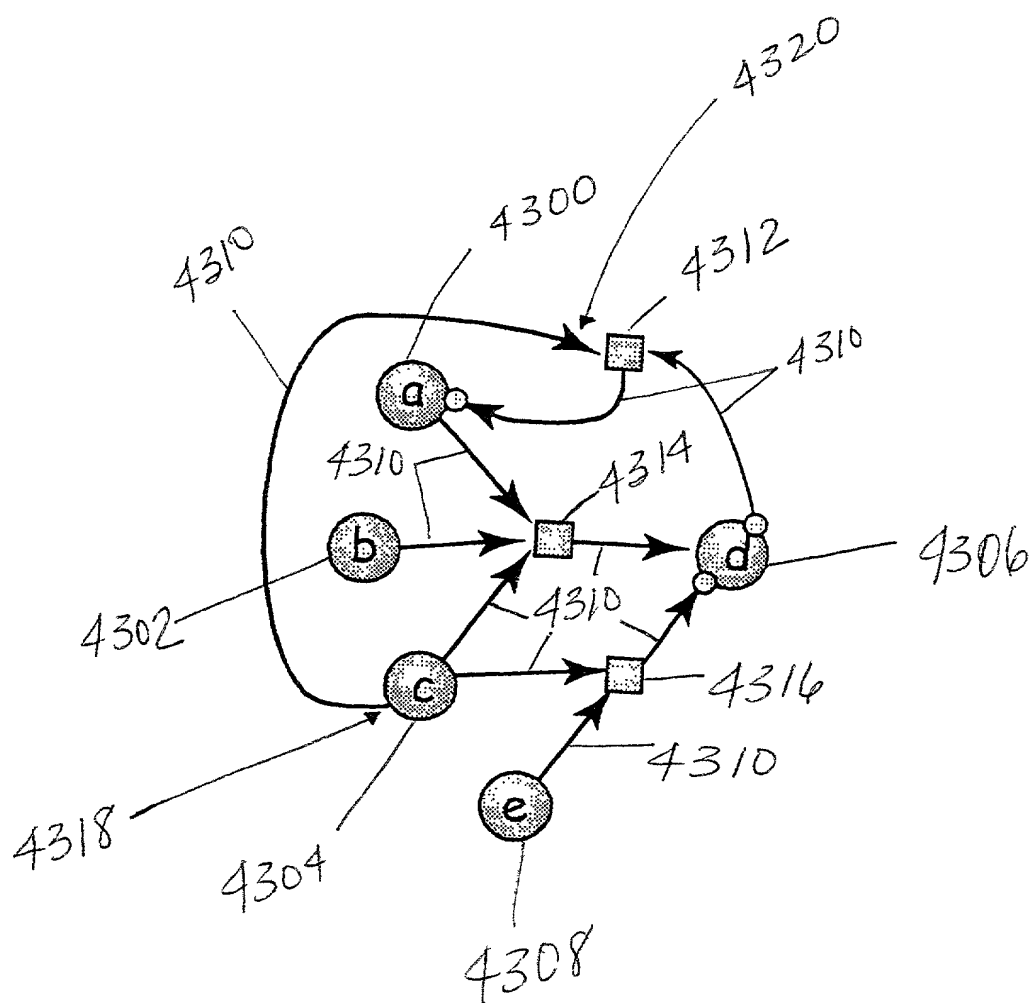


FIG. 43

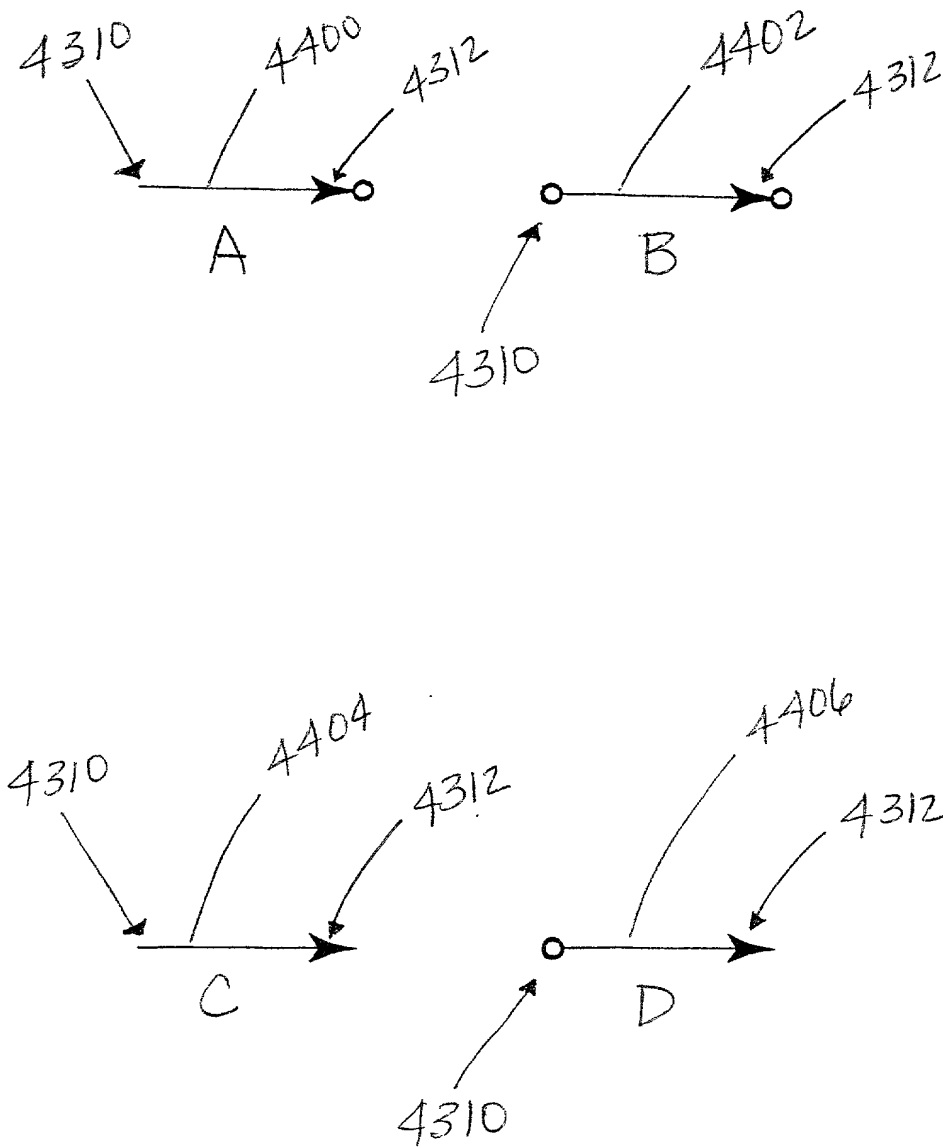


FIG. 44

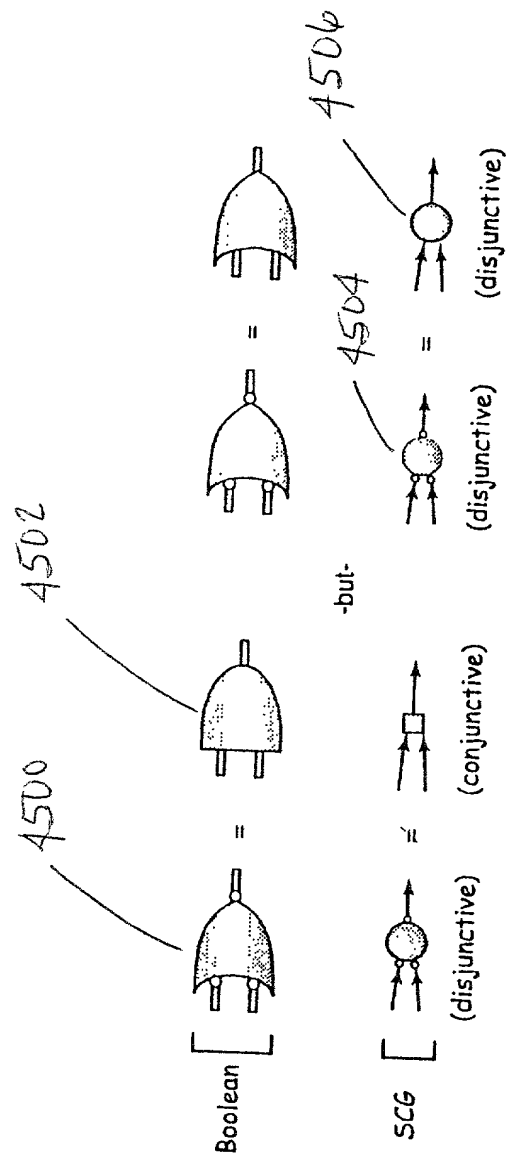
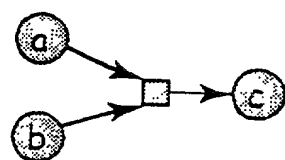
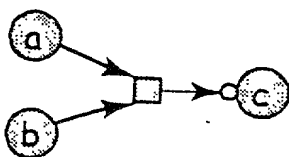


FIG. 45



$$a \wedge b \Rightarrow c = \neg(a \wedge b \wedge \neg c)$$

A



$$a \wedge b \Rightarrow \neg c = \neg(a \wedge b \wedge c)$$

B

FIG. 46

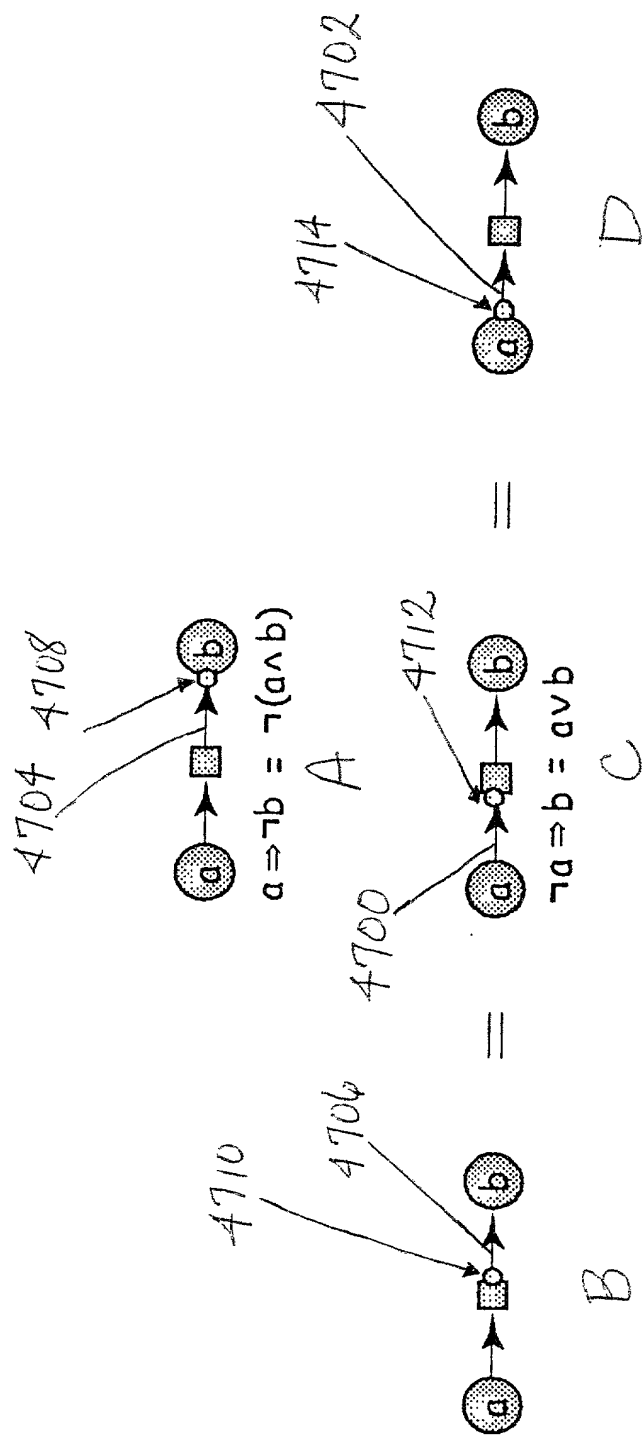


FIG. 47

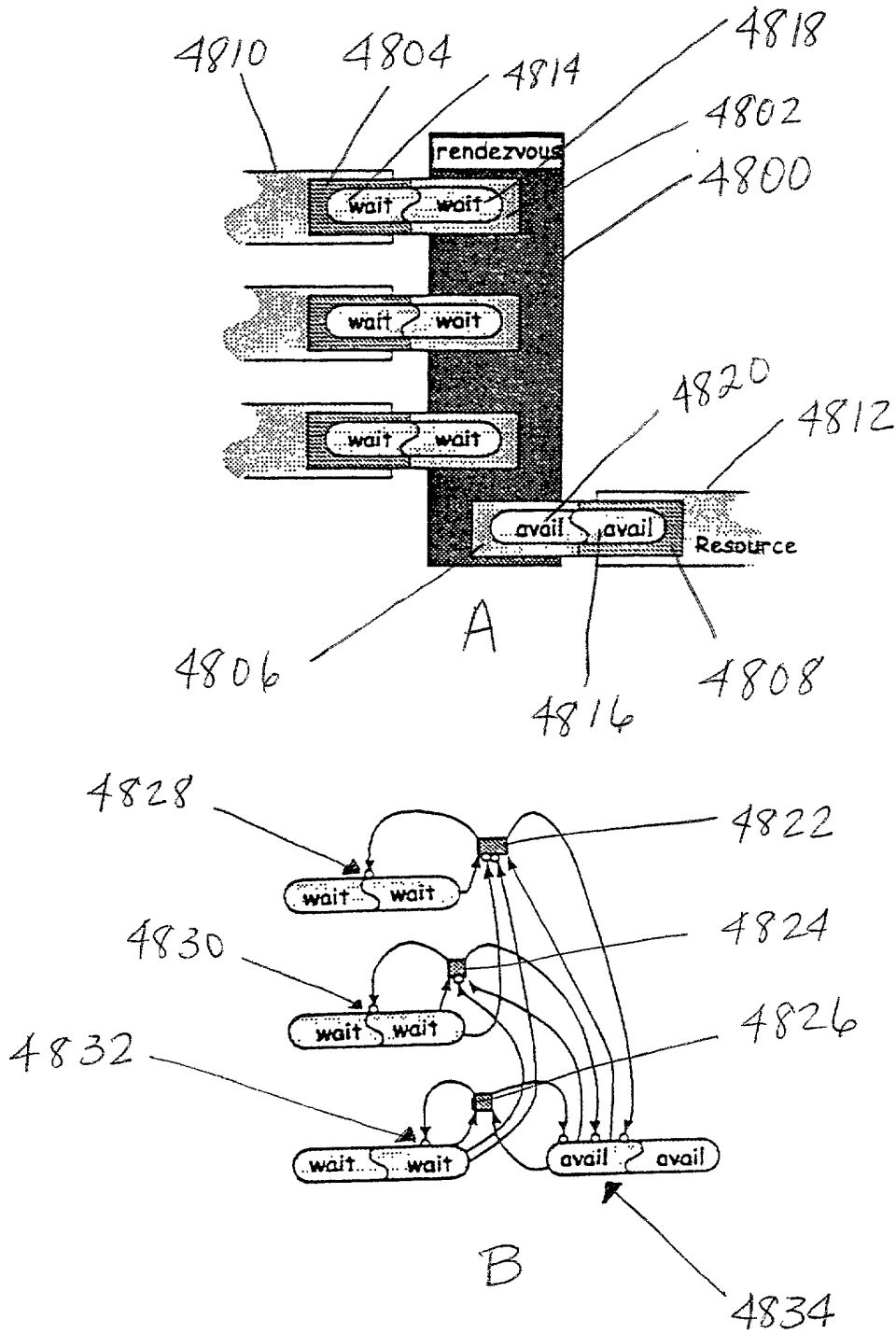


FIG. 48

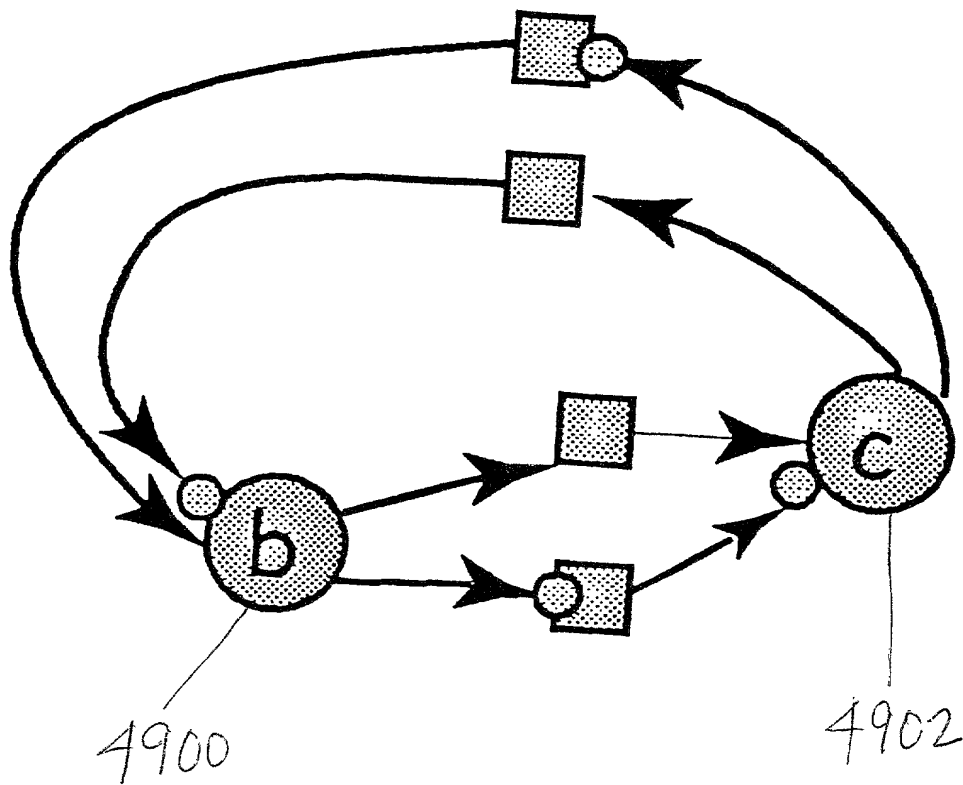
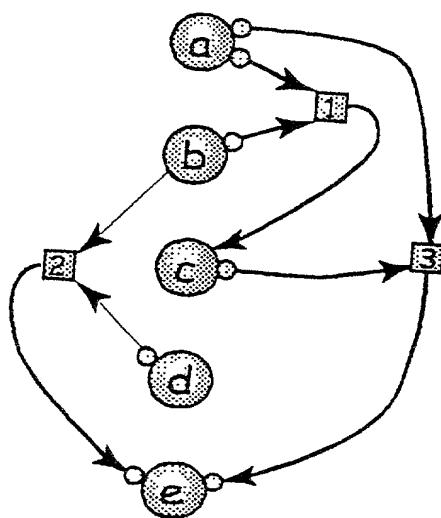


FIG. 49



A

$$\underbrace{(a \vee b \vee c)}_1 \wedge \underbrace{(\neg b \vee \neg d \vee \neg e)}_2 \wedge \underbrace{(a \vee c \vee \neg e)}_3$$

B

$$\underbrace{(\neg a \wedge \neg b \Rightarrow c)}_1 \wedge \underbrace{(b \wedge \neg d \Rightarrow \neg e)}_2 \wedge \underbrace{(\neg a \wedge \neg c \Rightarrow \neg e)}_3$$

C

FIG. 50

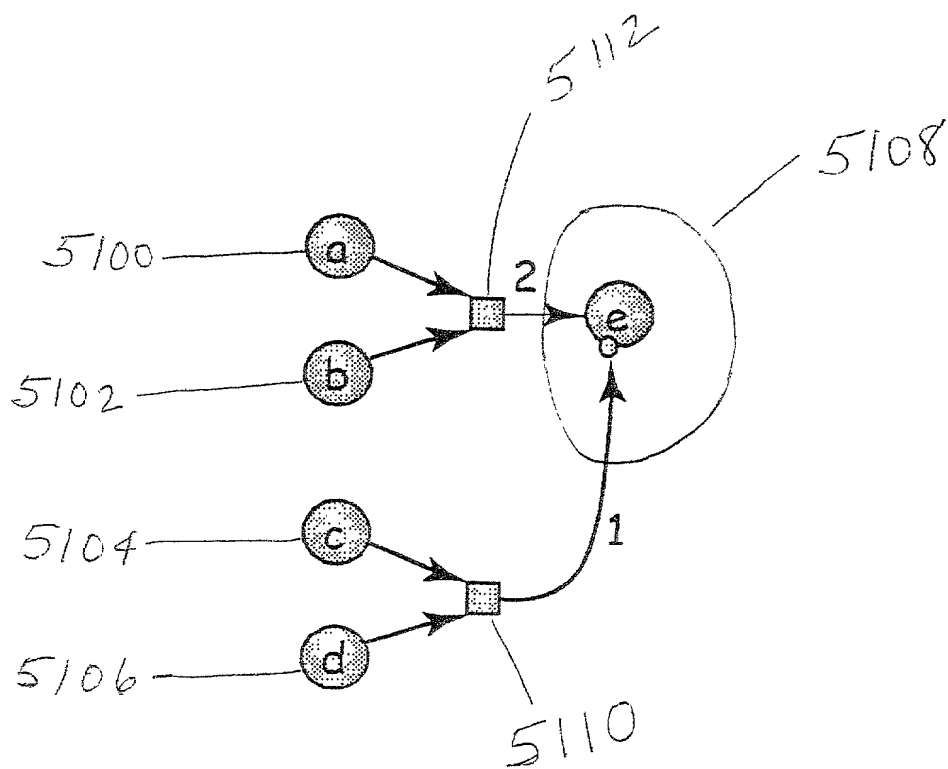


FIG. 51A

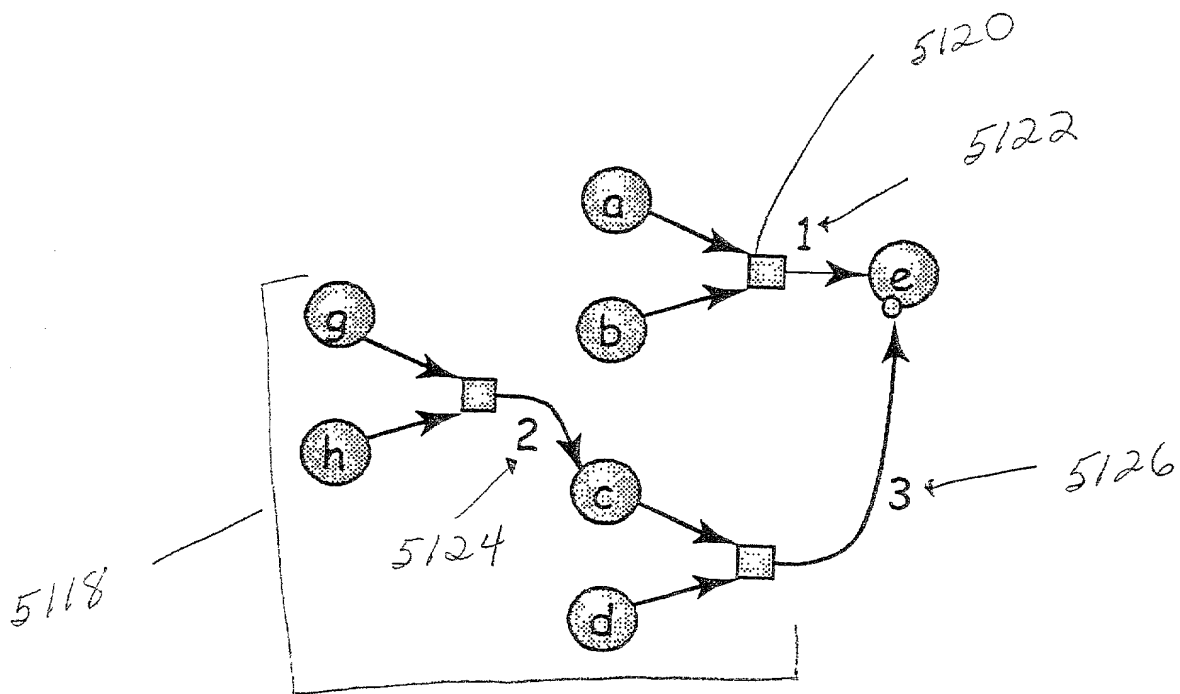
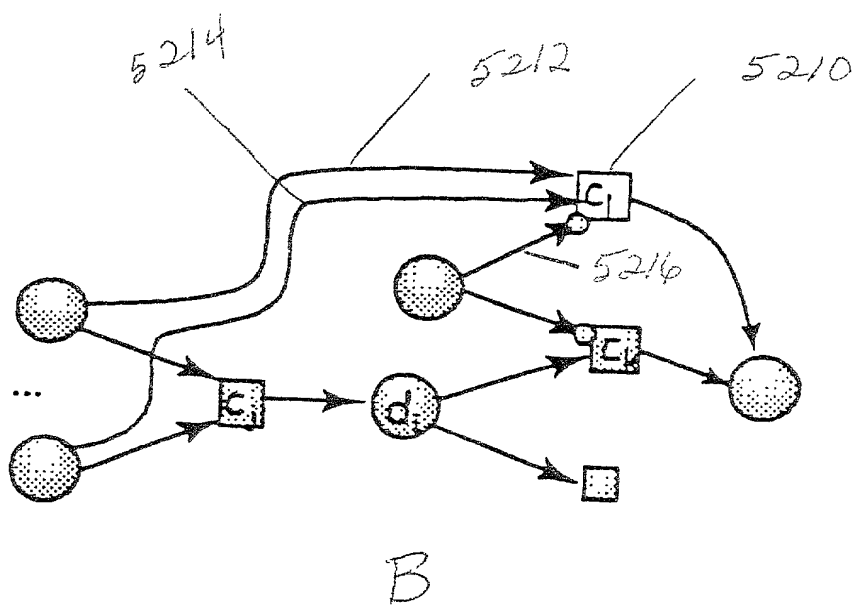
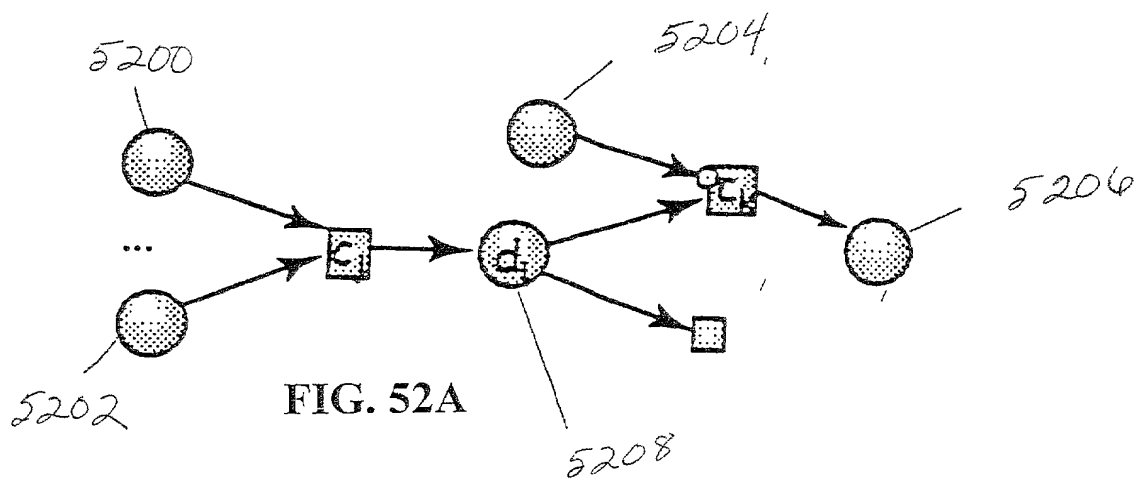


FIG. 51B



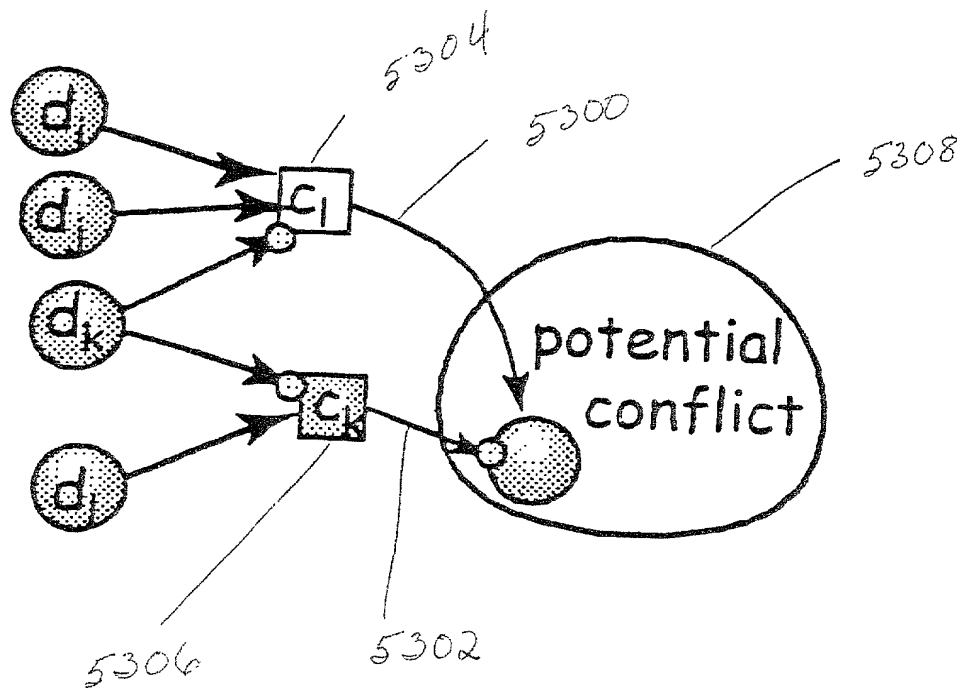


FIG. 53

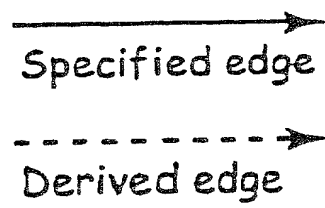
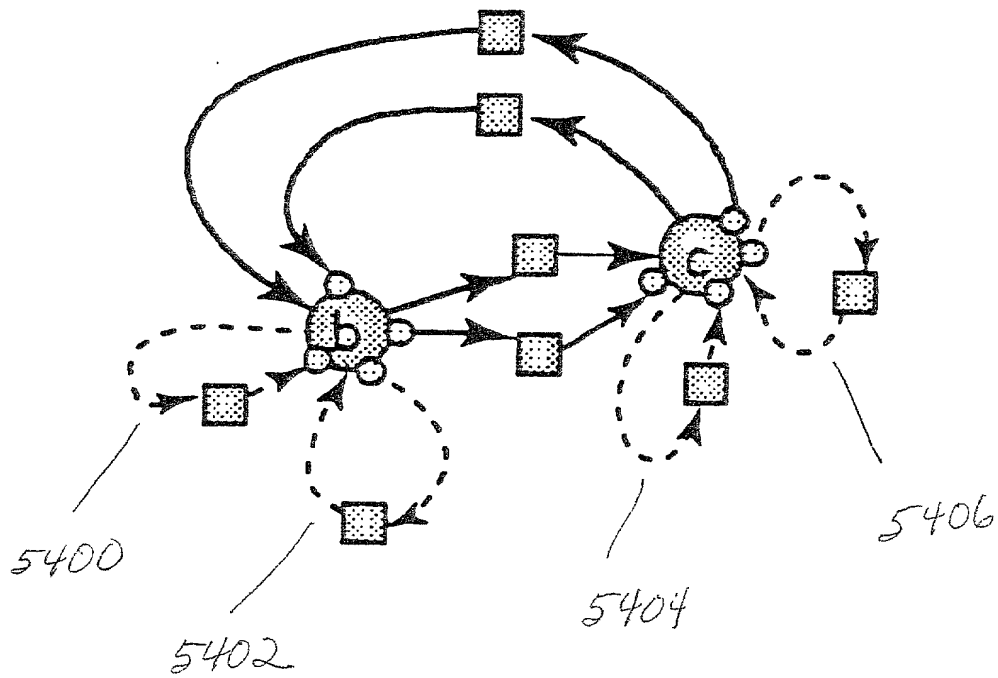


FIG. 54

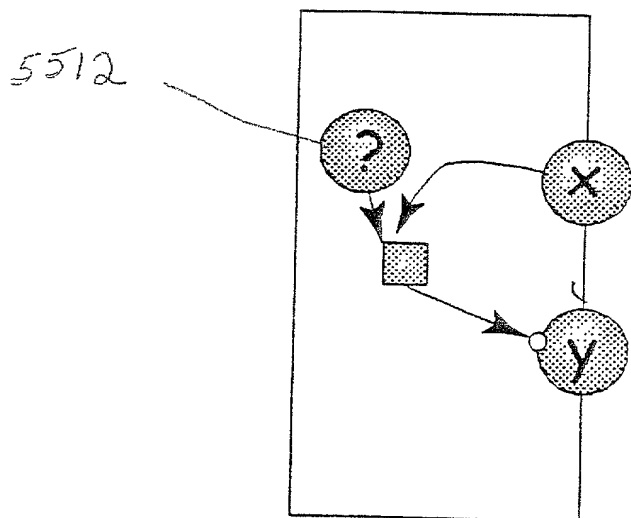
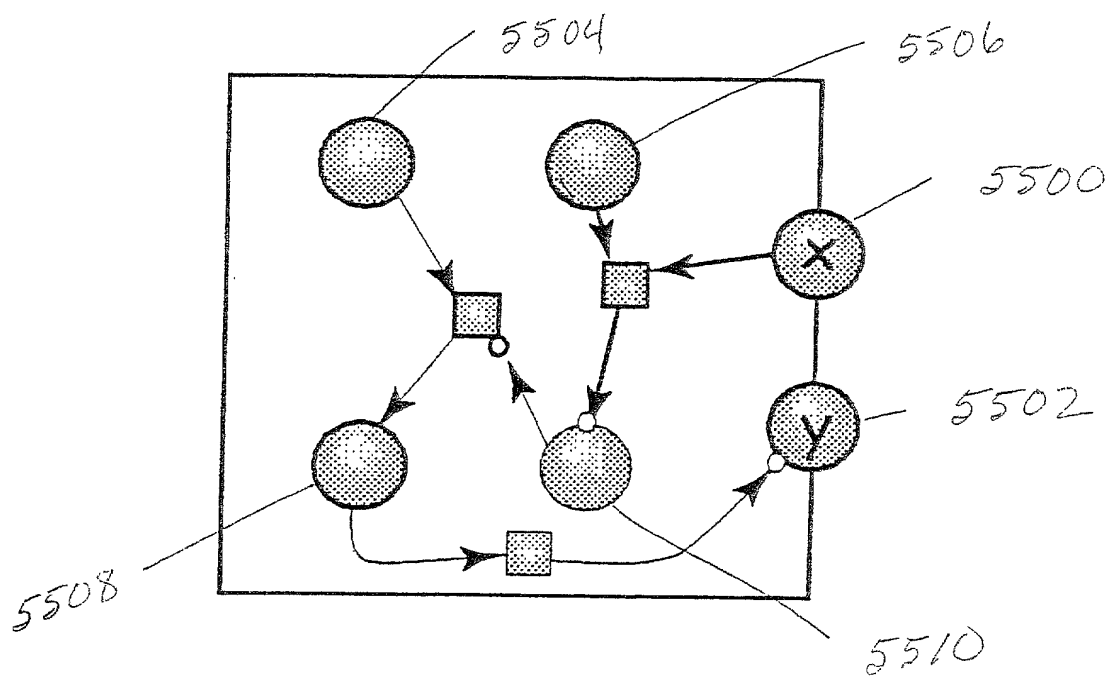


FIG. 55

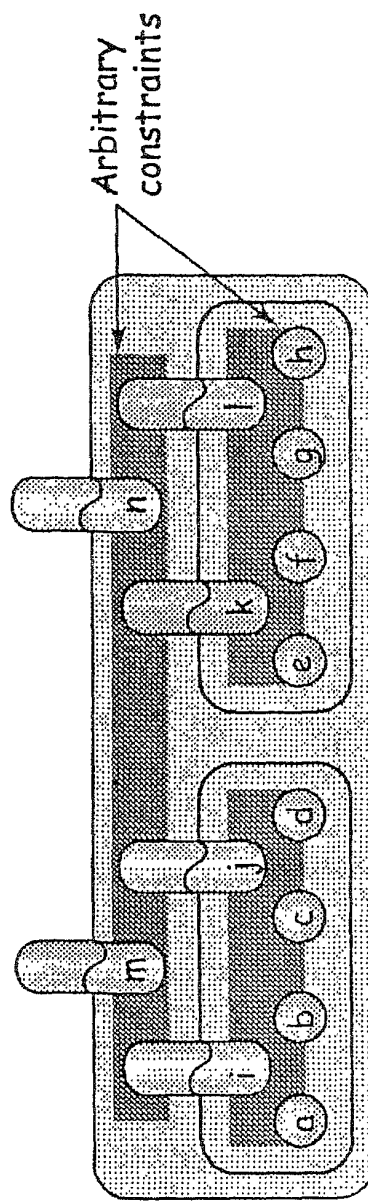


FIG. 56

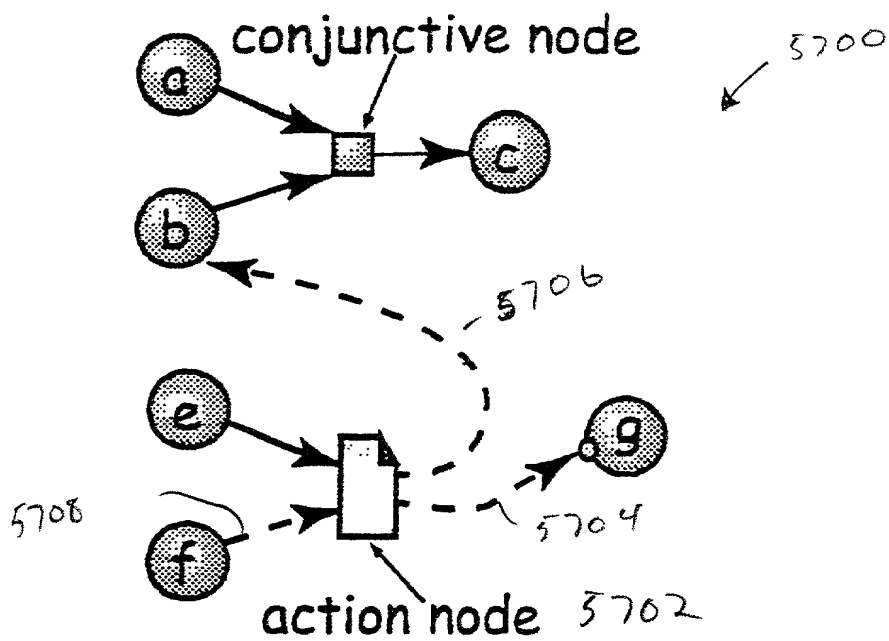


Figure 57

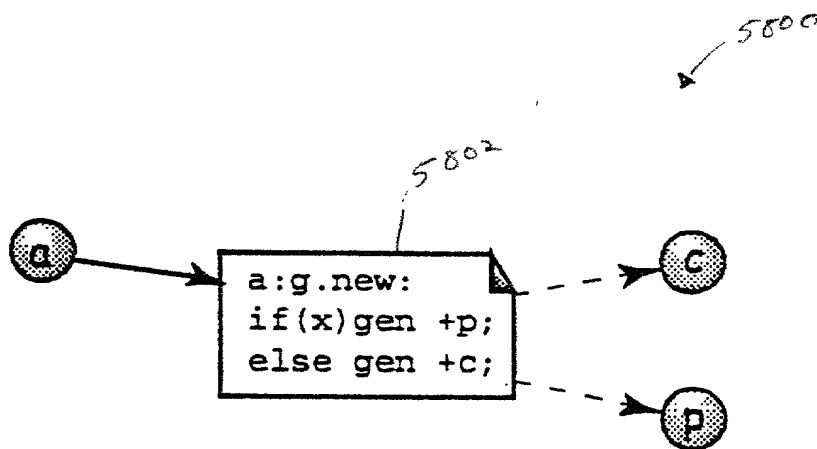


Figure 58

No visual representation in any control graph

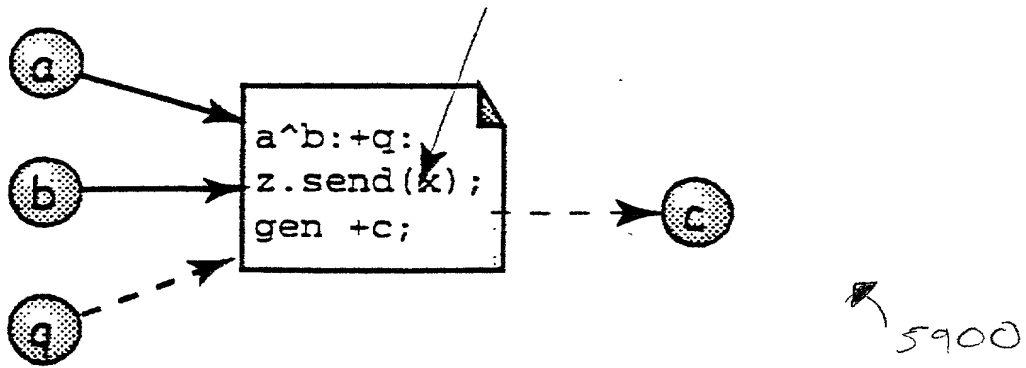


Figure 59

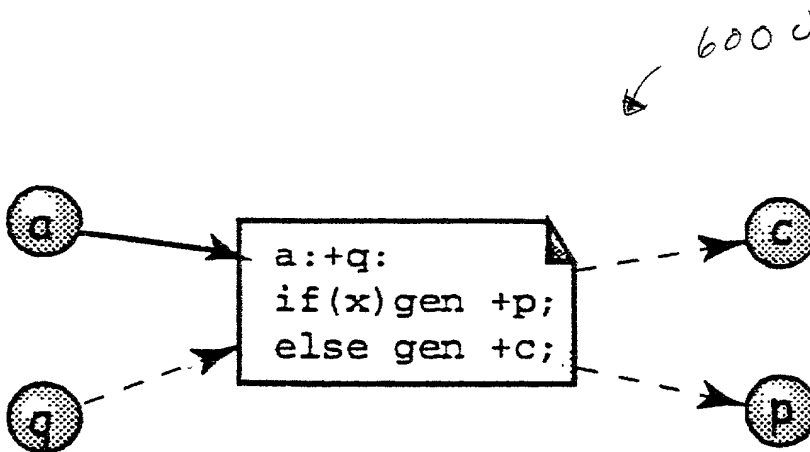
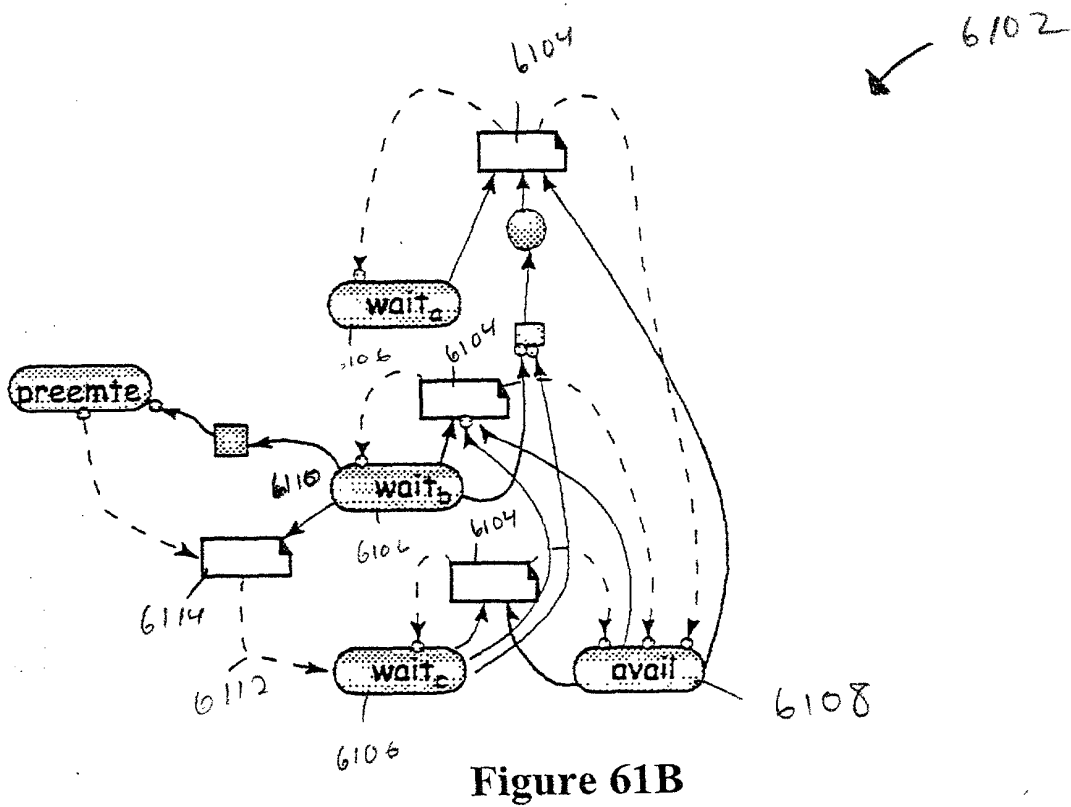
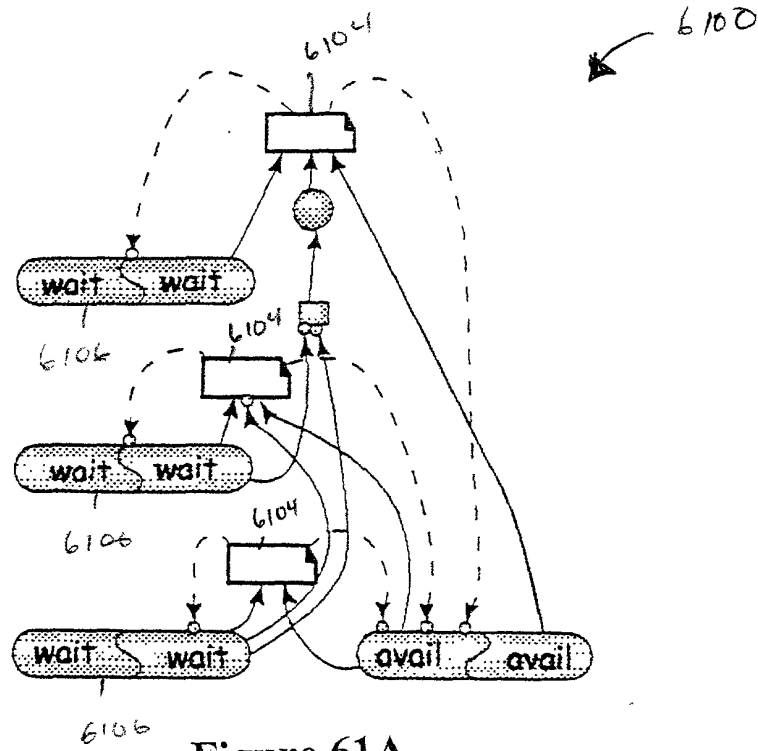


Figure 60

[illegible]

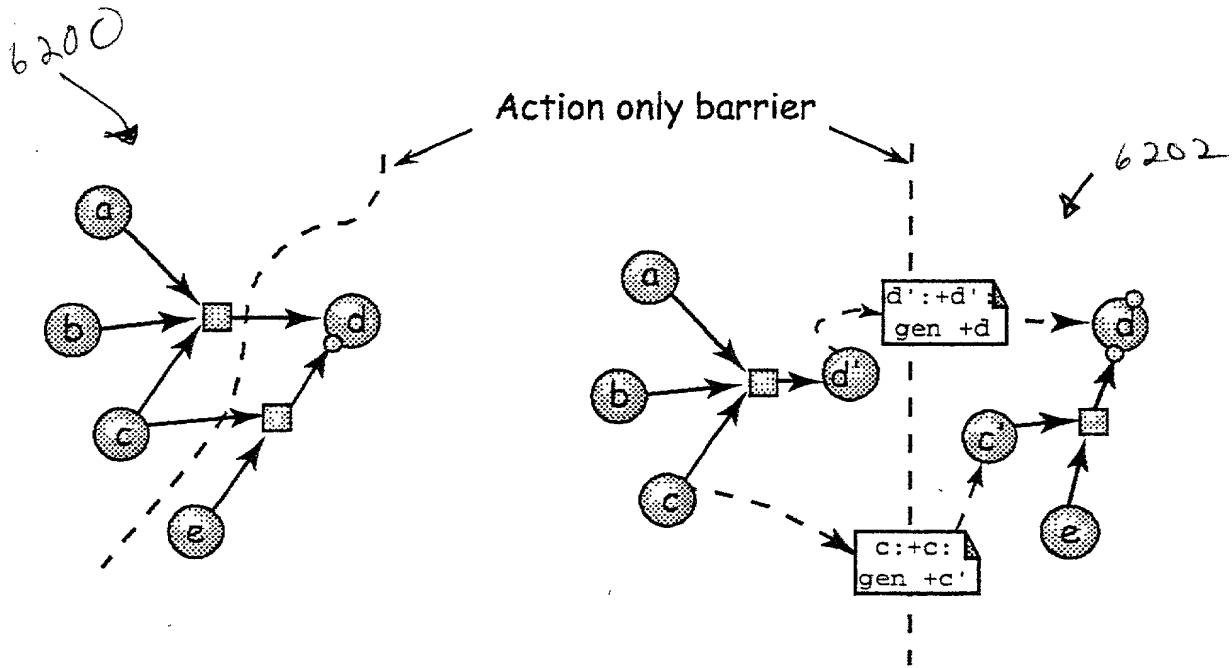


Figure 62A

Figure 62B

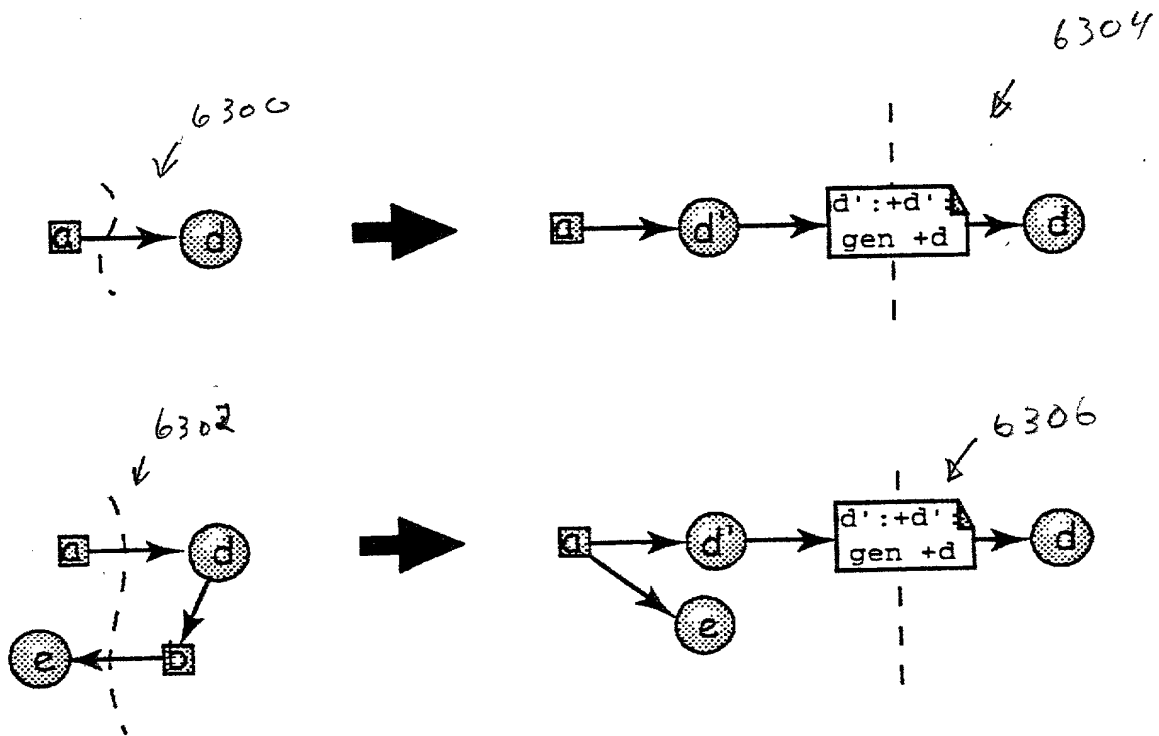


Figure 63

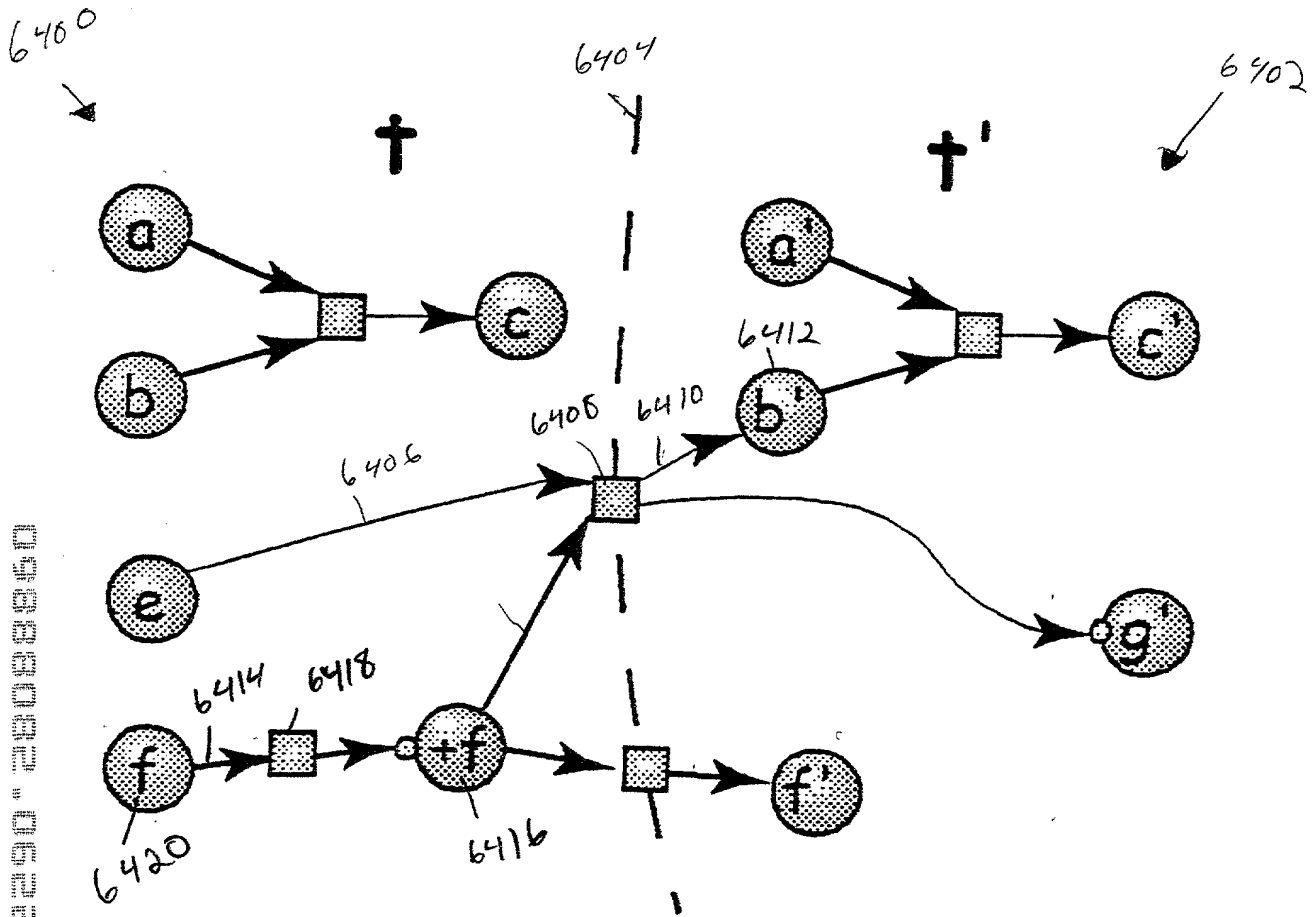
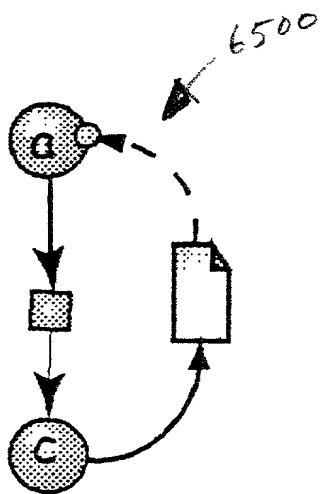
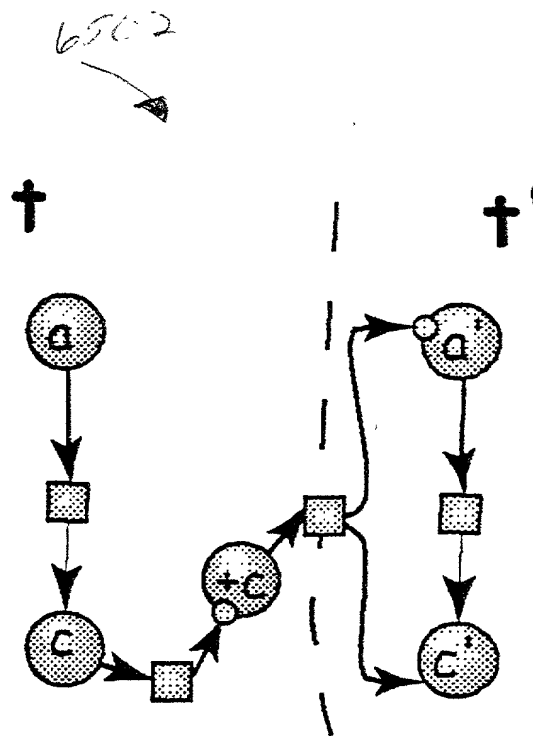


Figure 64

09880062 0622041



(a) Original DCG.



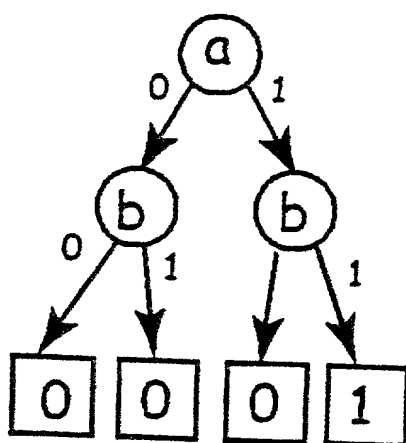
(b) Unrolled.

Figure 65

6602 $f = a \wedge b$ 6600

a	b	f
0	0	0
0	1	0
1	0	0
1	1	1

(a)



(b)

Figure 66

09888082-062201
FOUO-2808860

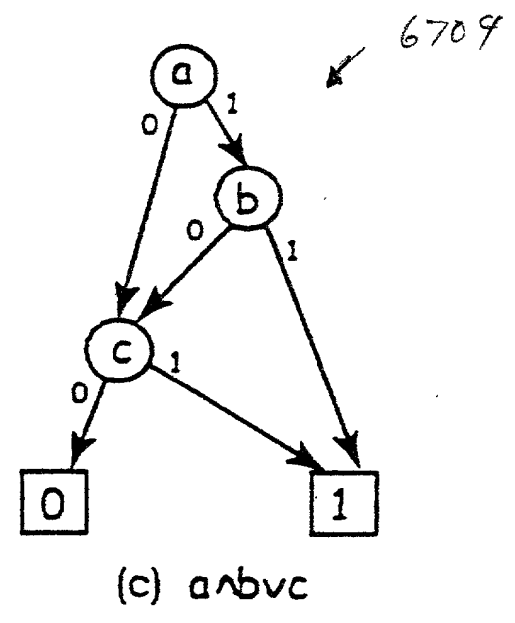
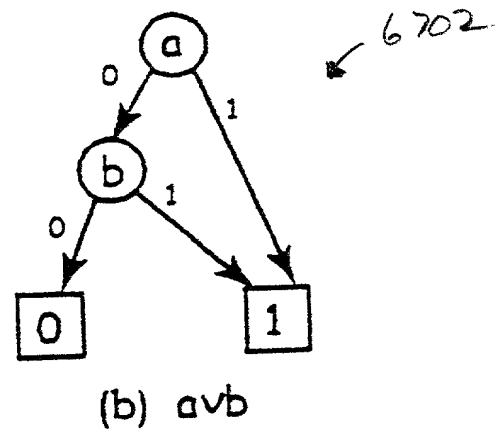
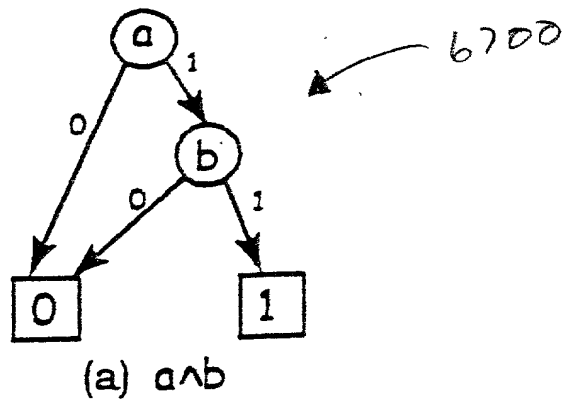
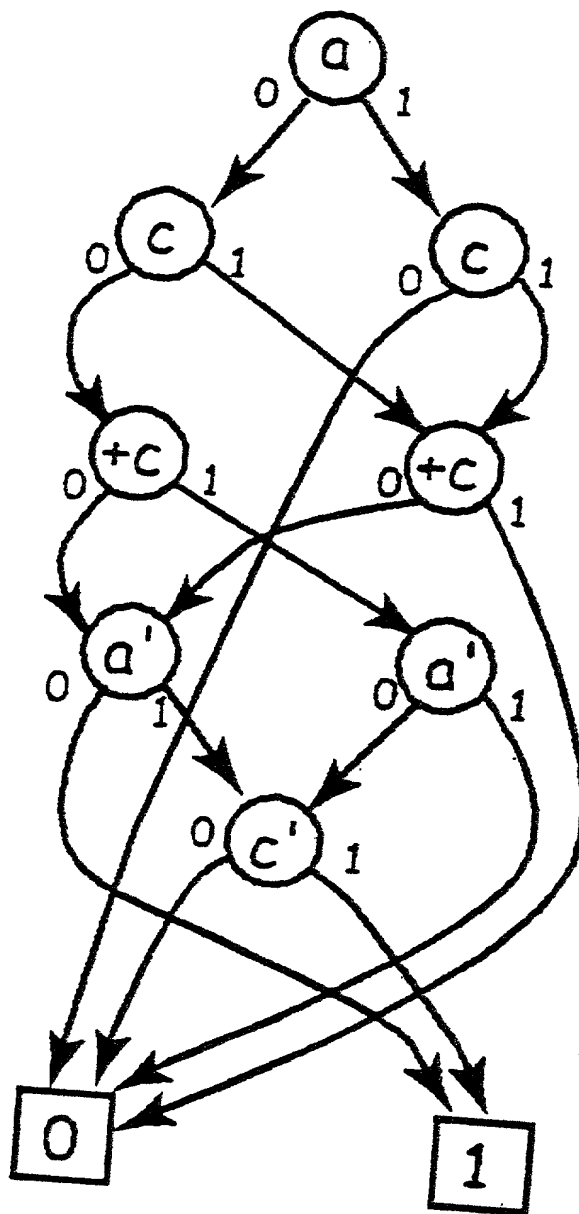


Figure 67



6800

Figure 68

Figure 69A

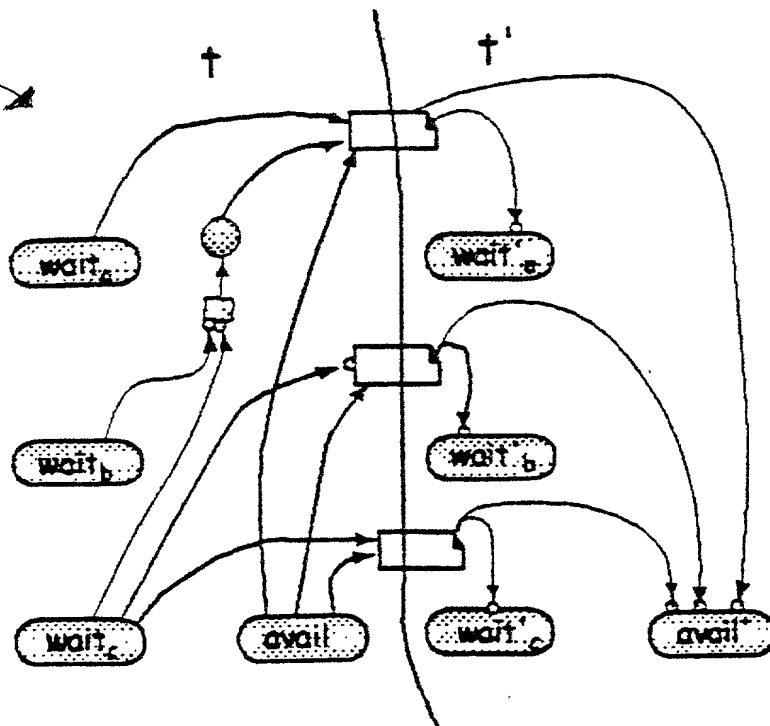
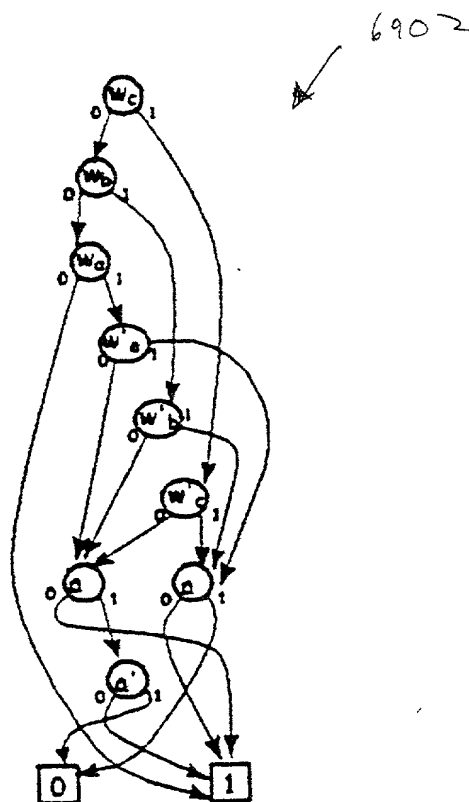


Figure 69B



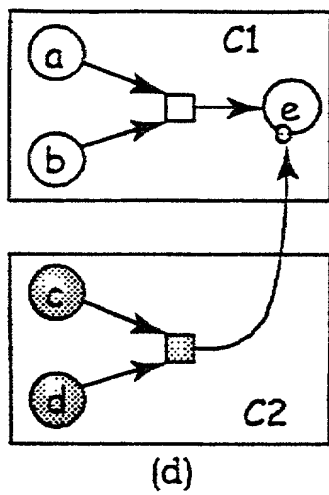
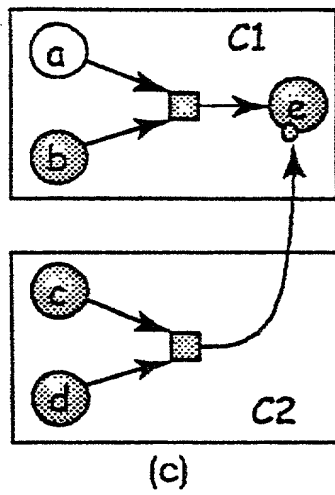
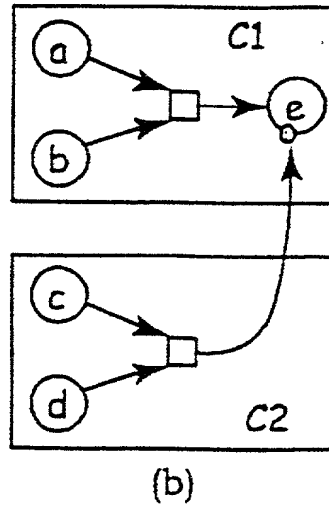
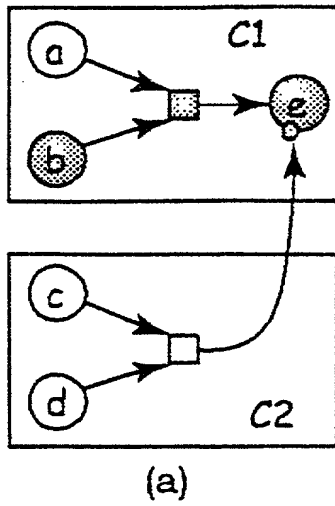


Figure 70

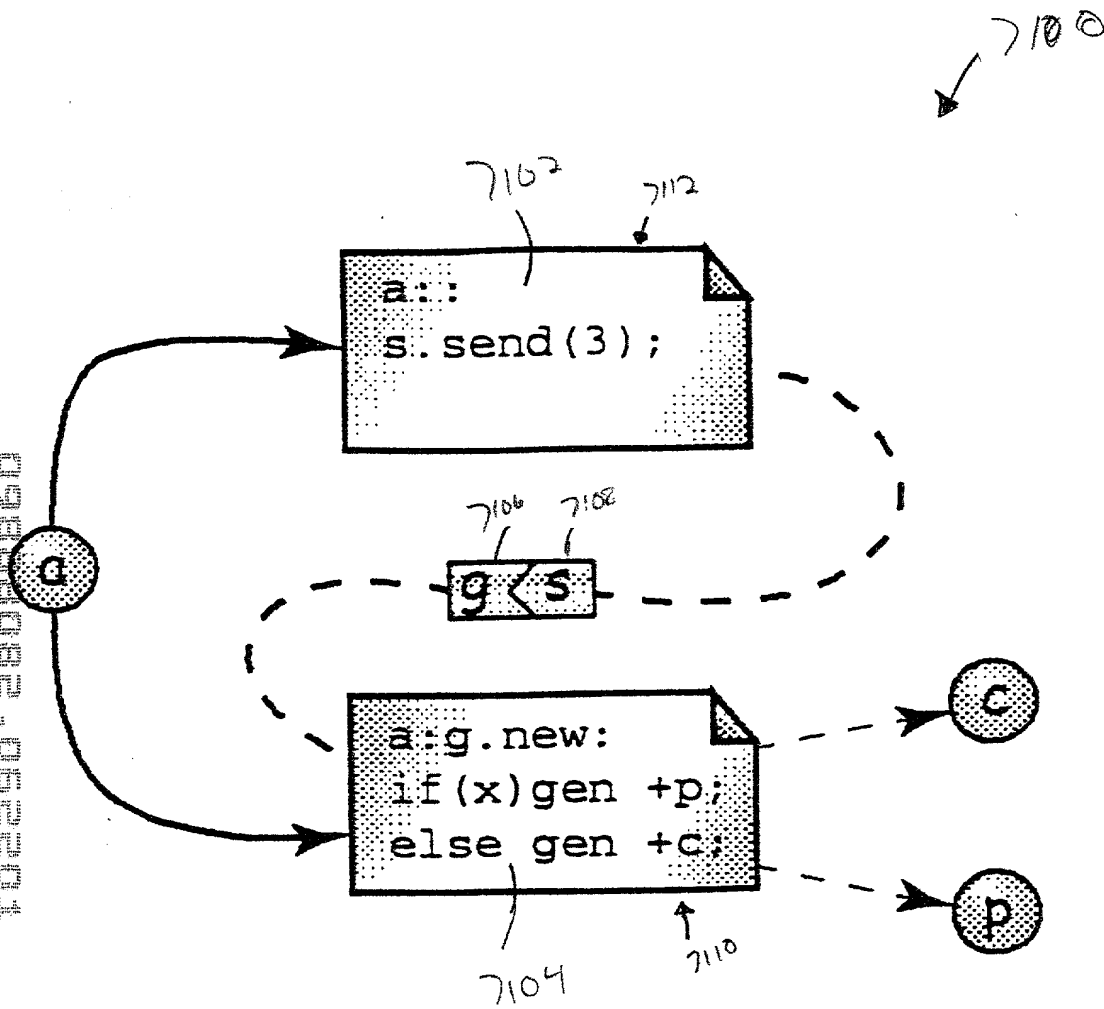


Figure 71

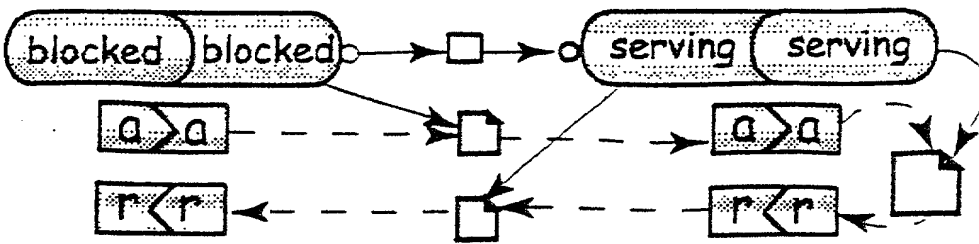


Figure 72

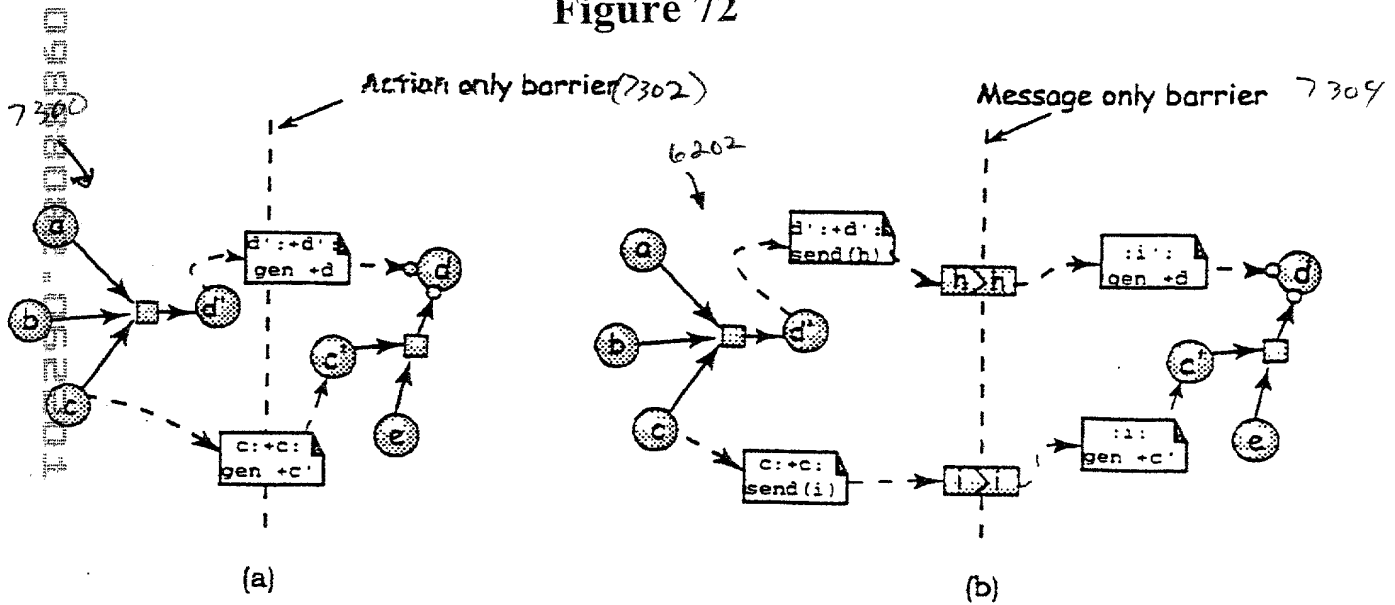
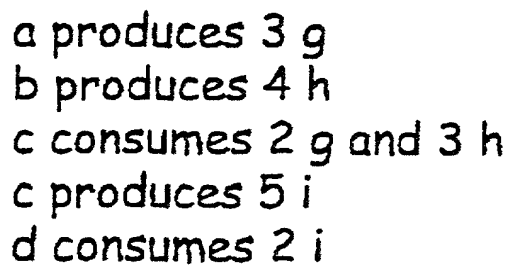


Figure 73

100-443886-100



```

graph LR
    a((a)) -- 3 --> c((c))
    b((b)) -- 4 --> c
    c -- 5 --> d((d))
  
```

Figure 74B

